

**EPA REGISTRATION NUMBER 70506-227 Vol. 1**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

May 15, 2015

Sherry B. Hutcheson  
United Phosphorus, Inc.  
630 Freedom Business Center, Ste 402  
King of Prussia, PA 19406

Subject: Label Amendment – Add Already Approved Grasses Use  
Product Name: BIFENTURE 10DF INSECTICIDE/MITICIDE  
EPA Registration Number: 70506-227  
Application Date: December 18, 2014  
Decision Number: 498899

Dear Ms. Hutcheson:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.


Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.



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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Maggie Rudick by phone at 703-347-0257, or via email at [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Kable Bo Davis', enclosed within a large, loopy oval shape.

Kable Bo Davis, Product Manager 3  
Invertebrate and Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure



<b>RESTRICTED USE PESTICIDE</b>		
Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.		
GROUP	3	INSECTICIDE

## **BIFENTURE<sup>®</sup> 10DF Insecticide/Miticide** (primary name)

**BIFENTURE<sup>®</sup> 10WSB Insecticide/Miticide**  
(alternate name)

**ACTIVE INGREDIENT:**

Bifenthrin\* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate..... 10.0%

**OTHER INGREDIENTS:** ..... 90.0%

**TOTAL** ..... 100.0%

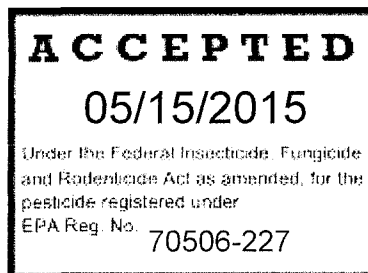
\*Cis isomers 97% minimum, trans isomers 3% maximum

### **KEEP OUT OF REACH OF CHILDREN** **CAUTION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

<b>FIRST AID</b>	
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.	
<b>Note to Physician:</b> This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.	
For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.	

United Phosphorus, Inc.  
630 Freedom Business Center  
King of Prussia, PA 19406  
1-800-438-6071



EPA Reg. No. 70506-227  
EPA Est. No.  
Net Contents



**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans (and Domestic Animals)**  
**CAUTION**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment:**

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

**Mixers and Loaders must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product through any type of irrigation system.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**Resistance.** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.



If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect pest may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls; waterproof gloves; and shoes plus socks.

### PRODUCT INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

*The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Avoid rough handling which may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.*

Bifenture WSB/DF insecticide must be diluted with water before spray application. Do not use nozzle screens (e.g. strainers) greater than 50 mesh size. *Determine the number of water soluble bag(s) to make up necessary spray suspension.*

*Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:*

$$\frac{\text{Rate for Pest (Active/Acre)}}{0.05 \text{ (amt. ai in each bag)}} \times \text{Number of Acres to be Treated} = \text{Number of Bifenture Water Soluble Bags to use for acres to be treated}$$

**Do not break bags.** *When the equation equals less than a whole number of bags, use the next higher whole number of bags.*

Fill the spray tank 1/2 full with water. Add required amount of Bifenture 10 WSB. *Open the outer wrapper of this product and immediately dump required number of water soluble bags into the spray tank. Allow the bag(s) to dissolve completely.* Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

#### Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.



### **Tank-Mixture**

Bifenture 10 WSB/DF Insecticide/Miticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing using a standard jar test or other similar method.

### **Buffer Zones**

#### **Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. <http://www.in.ces.usda/v/technical/agronom/newconbuf.pdf>.

#### **Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

#### **Buffer Zone for ULV Aerial Application**

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

#### **Buffer Zone for Non-ULV Aerial Application**

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

#### **Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to applications.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

### **Spray Drift Requirements**

#### **Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

#### **Temperature Inversions**

Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

#### **Droplet Size**

Use only medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.



#### Additional Requirements for Aerial Applications

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

#### Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

#### Artichoke

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Artichoke Plume Moth Cribrate Weevil	16.0 (0.10)	<p>Apply when pest populations reach damaging thresholds and repeat as necessary to maintain control, but not more often than 15-day intervals.</p> <p><b>Ground Application:</b> Apply in a minimum of 75 gallons per acre.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons per acre.</p> <p>Preharvest interval: 5 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>	<p>Do not apply more than 16 oz product (0.10 lb ai)/A between bud formation and harvest of an individual fruit.</p> <p>Do not apply more than 80 oz product (0.5 lb ai) per acre per season.</p>



## Brassicas

Broccoli, Chinese Broccoli, (gailon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy)

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 – 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.	Do not apply more than 32 oz product (0.2 lb ai) per acre per season, including at-plant applications.
Aphids Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Tobacco Budworm Saltmarsh Caterpillar Stink Bugs Thrips Wireworm (Adults)	5.3 to 16.0 (0.033 - 0.10)	<b>Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.  Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	
Banks Grass Mite Carmin Mite <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)		



## Bushberries

Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Blueberry Maggot Fruitworms Leafhoppers Lecanium Scale (crawlers) Obliquebanded Leafroller Plum Curculio Redbanded Leafroller Spanworm Thrips Drosophila spp. (adults & larvae, including Spotted Winged Drosophila) Variegated Leafroller	5.3 to 16.0 (0.033 to 0.10)	Apply in at least 2 gallons per acre by air or in at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 1 day.
Banks Grass Mite Carmin Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)		



## Caneberries

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Black Vine Weevil Leafrollers Orange Tortrix Root Weevils Thrips Vinegar Flies (adults) Drosophila spp. (Including Spotted Winged Drosophila) Lygus spp.	8.0 to 16.0 (0.05 to 0.1)	Apply by air or ground equipment using sufficient water to obtain full coverage of the canopy. Use a minimum of 10 gallons per acre by air and 50 gallons per acre by ground.  One application may be made pre-bloom and a second application may be made post bloom.  For Crown Borer: apply 16 oz product (0.1 lb ai) per acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/A) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 32 oz product (0.2 lb ai) per acre per season.  Preharvest interval: 3 days.
Carmine Mite Raspberry Crown Borer Twospotted Spider Mite	16.0 (0.1)		



## Canola, Crambe, Rapeseed

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshopper Loopers Other Lepidopterous Larvae Plant Bug Stink Bugs Seedpod Weevil Thrips	5.3 to 6.4 (0.033 - 0.04)	<p>Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.</p> <p>Thorough coverage is essential to achieve control.</p> <p>Preharvest interval: 35 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>	<p>Do not apply more than 12.8 oz product (0.08 lb ai) per acre per season.</p> <p>Do not make applications less than 14 days apart.</p>



## Citrus

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
BlueGreen Citrus Root Weevil Brown Leaf Notcher Diaprepes Root Weevil Fuller Rose Beetle Green Citrus Root Weevil Little Leaf Notcher Southern Blue- Green Citrus Weevil	40.0 to 80.0 (0.25 to 0.50)	<p>Apply Bifenture 10 WSB/DF by ground equipment to bare soil beneath citrus trees. Bifenture 10 WSB/DF must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume will insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.</p> <p>Bifenture 10 WSB/DF protects citrus tree roots from Diaprepes and other citrus root weevils feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As eggs hatch in new foliage, neonates fall to the soil surface BELOW the tree and come in contact with Bifenture 10 WSB/DF as they attempt to burrow into the root zone.</p> <p>Minimize disturbance of the soil beneath trees.</p> <p>Timing of Bifenture 10 WSB/DF applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Bifenture 10 WSB/DF application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon: numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Bifenture 10 WSB/DF soil barrier in place prior to drop of the neonates.</p> <p>Bifenture 10 WSB/DF is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Apply in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.</p>	<p>Do not apply through irrigation systems.</p> <p>Do not allow any application of Bifenture 10 WSB/DF to contact fruit or foliage.</p> <p>Do not apply more than a total of 80 oz product (0.5 lb ai ) per acre per year.</p> <p>Ground application only. Do not apply by air.</p>
Asian Cockroach Fire Ants	16.0 to 40.0 (0.1 to 0.25)	<p><b>Additional Instructions:</b></p> <p>Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.</p> <p>Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.</p> <p>If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, use 80 oz product (0.50 lb ai) to obtain the longest residual management of Diaprepes root weevil.</p> <p>If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 40 oz product (0.25 lb ai) can be applied early season and 0.25 pound active can be applied later in the season.</p> <p>Preharvest interval: 1 day.</p> <p>Apply in a minimum of 40 gallons of finished spray per acre.</p>	



## Cotton

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	3.2 to 16.0 (0.02 to 0.10)	This product may be applied in water. Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by air.	Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not graze livestock in treated areas or cut treated crops for feed. Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm	6.4 to 16.0 (0.04 to 0.10)	To control Boll Weevil: apply at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. To control Mites and Aphids: apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established. Preharvest interval: 14 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	
Beet Armyworm Carmine Spider Mite <i>Lygus</i> spp. Pink Bollworm Twospotted Spider Mite Whiteflies	9.6 to 16.0 (0.06 to 0.10)		



## Cucurbits

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza); (*Luffa* spp.) (includes hechima, Chinese okra); (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.)

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Wireworms Maggots Grubs	8.0 to 16.0 (0.05 – 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.	Do not apply more than 48 oz product (0.3 lb ai) per acre per season.  Do not make more than two applications after bloom.
Aphids Armyworms Cabbage Looper Corn Earworm Cucumber Beetles Cutworms Grasshopper Leafhoppers Plant Bug Pickleworm Melonworm Rindworm Squash Bugs Squash Vine Borer Stink Bugs Tobacco Budworm	8.0 to 16.0 (0.05 – 0.10)	<b>Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.  Thorough coverage is essential to achieve control.  Preharvest interval: 3 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not make applications less than 7 days apart.
Banks Grass Mite Carmin Mite <i>Lygus</i> Spp. Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)		



## Fruiting Vegetables

Eggplant, Pepper (Bell & Non-Bell), Groundcherry, Pepino

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Armyworms Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafminers Loopers Pepper Weevil Plant Bug Stink Bug Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whiteflies	5.3 to 12.8 (0.033 to 0.08)	Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not make applications less than 7 days apart.  Do not apply more than 32 oz product (0.2 lb ai ) per acre per season.
Banks Grass Mite Broad Mite Carminc Mite <i>Lygus</i> Spp. Pacific Spider Mite Two Spotted Spider Mite	12.8 (0.08)		



Tomato, Tomatillo

[illegible]



**GRASS FORAGE, FODDER, AND HAY GROUP AND GRASS GROWN FOR SEED,  
PASTURE AND RANGELAND**

(including: bahiagrass, barnyardgrass, bentgrass, Bermudagrass, Kentucky bluegrass, big bluestem, smooth brome, buffalograss, reed canarygrass, centipedegrass, crabgrass, cupgrass, dallisgrass, sand dropseed, Kentucky fescue, meadow foxtail, eastern gamagrass, side-oats grama, guinea grass, Indian grass, Johnsongrass, lovegrass, napiergrass, oatgrass, orchardgrass, pangolagrass, paspalum, redtop, Italian ryegrass, St. Augustine grass, sprangletop, squirreltailgrass, stargrass, switchgrass, timothy, crested wheatgrass, wild ryegrass and zoysis grass. Also included are sudangrass and sorghum forages and their hybrids).

**NOTE: Use on grasses is limited to the States of Idaho, Oregon, and Washington.**

Pest	Rate oz/A (lbs ai/A)	Instructions	Restrictions
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Blue Alfalfa Aphid <sup>1</sup> Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Green Peach Aphid <sup>1</sup> Hornworms Meadow Spittlebug Pea Aphid <sup>1</sup> Potato Leafhopper Spotted Alfalfa Aphid <sup>1</sup> Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworms	5.3 to 16.0 ozs/A (0.033 to 0.1 lbs ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.  Use higher specified rates for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.  Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment.  Higher volumes of finished spray may improve insect control under higher temperatures, when foliage is dense and/or when insect pressure is high.	Do not apply more than 0.2 lbs. active ingredient per acre per season.  Do not make applications less than 14 days
Armyworm, southern Armyworm, true Armyworm, yellowstriped Ant Cereal Leaf Beetle Chinch Bug Cricket Grass Mealybug	8.0 to 16.0 ozs/A (0.05 to 0.1 lbs ai/A)	Applications may be made up to 30 days prior to harvest for forage and hay.  <sup>1</sup> Aphid control may be	



Pest	Rate oz/A (lbs ai/A)	Instructions	Restrictions
Grasshoppers Range Caterpillar Stink Bugs Armyworm, fall Black Grass Bug		variable depending on species present and host-plant relationships.	
Hunting Bill Bug Plant Bug spp.	16.0 ozs/A (0.1 lbs ai/A)		

## Grapes

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Cutworms Eastern Grape Leafhopper Grape Berry Moth Japanese Beetles Adults Variegated Leafhopper Western Grape Leafhopper	8.0 to 16.0 (0.05 - 0.10)	Apply in a minimum of 10 gallons by air or in a minimum of 25 gallons with ground equipment.  Thorough coverage is essential to achieve control.  When pest pressure is moderate to severe, use higher rate.  Preharvest interval: 30 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 16 oz product (0.10 lb ai) per acre per season.
Black Vine Weevil Glassywinged Sharpshooter Twospotted Spider Mite	16.0 (0.10)		



## Hops

Not for this use in California

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.10)	Preharvest interval: 14 days.  <b>Ground Application:</b> For best results, full coverage is essential. For early season applications use 100-150 gallons per acre. For late season applications use 200-250 gallons per acre.  For Root Weevil control, make a directed spray to the base of the plant. Spray up the bine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant.	Do not apply more than 16 oz product (0.10 lb ai) per acre per application.  Do not apply more than 48 oz product (0.3 lb ai) per acre per season.
Root Weevils	8.0 to 16.0 (0.05 to 0.10)	<b>Air Application (for late season control of Twospotted Spider Mites):</b>	A spray interval of 21 days between applications must be maintained.
Twospotted Spider Mite	16.0 (0.10)	Apply a minimum of 16 oz product (0.10 lb ai) per application in a minimum of 10 gallons per acre.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	



## Leafy Petiole Vegetables

Celery, Cardoon, Chinese celery, Celtuce, Florence fennel, Rhubarb, Swiss chard

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whiteflies Wireworm (Adults)	5.3 to 16.0 (0.033 to 0.10)	Apply in at least 2 gallons per acre by air or at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart.
Banks Grass Mite Carmin Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)		



## Lettuce, Head

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bug Spp. Tobacco Budworm	5.3 to 16.0 (0.033 - 0.10)	Apply as necessary for insect control using a minimum of 20 gallons per acre with ground equipment and 5 gallons per acre by air. Thorough coverage is essential to achieve control. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not make applications less than 7 days apart. Do not apply more than 80 oz product (0.5 lb ai) per acre per season.
Carmine Mite <i>Lygus</i> Spp. Two Spotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)		



## Mayhaw

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Plum Curculio	12.8 to 16.0  (0.08 to 0.10)	Make foliar applications in at least 28 gallons per acre. Preharvest interval: 30 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than once every 7 days. Do not apply more than 32 oz product (0.2 lb ai) per acre per season.

## Peanut

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Beet Armyworm Corn Earworm Cutworm Spp. Fall Armyworm Grasshoppers Green Cloverworm Leafhoppers Lesser Cornstalk Borer Loopers Redneck Peanut Worm Southern Armyworm Southern Corn Rootworm Stink Bugs Threecornered Alfalfa Hopper Velvetbean Caterpillar Yellowstriped Armyworm	5.3 to 16.0  (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16.0 oz product (0.10 lb ai) per acre at a minimum of 14 day intervals. Preharvest interval: 14 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 80 oz product (0.5 lb ai) per acre per season.
Aphids Spider Mites Thrips Whiteflies	5.12 to 16.0  (0.08 to 0.10)		



## Pears

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Codling Moth Cutworms Green Fruitworm Leafhoppers Leafminers Leafrollers <i>Lygus</i> Spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs	6.4 to 32.0 (0.04 to 0.2)	<p><b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons per acre by air.</p> <p>Apply as needed to maintain control using a minimum of 30-day spray interval.</p> <p>Preharvest interval: 14 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>	<p>Do not apply more than 80 oz product (0.5 pound ai) per acre per season with no more than 0.45 pound ai per acre applied after petal fall.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p>
Yellow Spider Mite	9.6 to 32.0 (0.06 to 0.2)		
European Red Mite Twospotted Spider Mite	12.8 to 32.0 (0.08 to 0.2)		



### Root Crops (except sugarbeets)

Crops	Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Burdock, edible Carrot Celeriac Chervil, turnip rooted Chicory Ginseng Horseradish Parsley, turnip rooted Parsnip Radish Radish, oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Aphids	12.8	Make foliar applications in at least 25 gallons per acre. Preharvest interval: 21 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Apply no more than once every 7 days. Do not apply more than 80 oz product (0.5 lb ai) per acre per season.
	Beet	to		
	Armyworm	16.0		
	Celery Leaf-tier	(0.08		
	Corn Earworm	to		
	Cross-striped Cabbageworm	0.10)		
	Cutworms			
	Diamondback Moth			
	European Corn Borer			
	Fall Armyworm			
	Fire Ants			
	Green Cloverworm			
	Hornworms			
	Imported Cabbageworm			
	Loopers			
	Southern Armyworm			
	Tobacco Budworm			
	Velvetbean Caterpillar			
	Yellowstriped Armyworm			
	Spider Mites			
	Whiteflies			
Garden Beet	Aphids	12.8	Make foliar applications in at least 25 gallons per acre. Preharvest interval: 1 day.	Apply no more than once every 7 days. Do not apply more than 64 oz product (0.4 lb ai) per acre per season.
	Fire Ants	to		
	Flea Beetles	16.0		
	Lepidopterous Larvae	(0.08		
	Spider Mites	to		
	Whitefly	0.10)		



## Soybean

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Soybean Aphid	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16 oz product (0.10 lb ai) per acre at a minimum of 30 day intervals.	Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Apply no more than once every 7 days.
Spider Mites	12.8 to 16.0 (0.08 to 0.10)	Preharvest interval: 18 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	



## Spinach

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Armyworms Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips Tomato Pinworm Tomato Hornworm	5.3 to 16.0 (0.033 to 0.10)	For control of fire ants apply Bifenture 10 WSB/DF to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications. Preharvest interval: 40 days. Apply in 5-50 gallons per acre by air or 10-50 gallons finished spray per acre by ground. For control of Whiteflies apply foliar treatments of Bifenture 10 WSB/DF by ground or air at rates up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not make applications less than 7 days apart. Do not apply more than 64 oz product (0.4 lb ai) per acre per season.
Broad Mite Banks Grass Mite Carmin Mite Fire Ants <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 to 0.10)		



## Strawberries

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Aphids Armyworms Flea beetles <i>Heliothis</i> Spp. Leafrollers <i>Lygus</i> Spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds. Repeat as necessary at 7-14 day intervals. Preharvest interval: 0 days. <b>Ground Application:</b> Apply in a minimum of 50 gallons per acre. <b>Air Application (prohibited in Florida):</b> Apply in a minimum of 5 gallons per acre.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 80 oz product (0.5 lb ai) per acre per season.
Black Vine Weevil Strawberry Root Weevil Thrips Vinegar Flies (adults) <i>Drosophila</i> spp. (including spotted winged <i>drosophila</i> )	8.0 to 32.0 (0.05 to 0.2)		
Spider Mites	16.0 to 32.0 (0.10 to 0.2)		

**CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS:** Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Bifenture 10WSB/DF greater than 0.10 lb ai/acre, harvesters must wear gloves for five (5) days following application.



## Succulent Peas and Beans

Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea; Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean; Jackbean; Soybean (immature seed); Sword bean

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 – 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant. <b>Foliar Use:</b> Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Preharvest interval: 3 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>	Do not apply more than 32 oz product (0.2 lb ai)) per acre per season including at plant applications.
Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	4.0 to 16.0 (0.025 - 0.10)		
Adult Sap Beetle Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Cloverworm Corn Earworm Corn Rootworm Adult Cucumber Beetles Cutworms European Corn Borer Fall Armyworm Japanese beetle Loopers Pea Leaf Weevil Pea Weevil Plant Bug Southern Armyworm Stink Bugs Tarnished Plant Bug Thrips Yellowstriped Armyworm Webworms Western Bean Cutworm	5.3 to 16.0 (0.033 - 0.10)		
Banks Grass Mite	12.8 to		



<b>Pest</b>	<b>Rate oz/A (lb ai/A)</b>	<b>Instructions</b>	<b>Restrictions</b>
Carminc Mite <i>Lygus</i> Spp. Twospotted Spider Mite Whiteflies	16.0 (0.08 - 0.10)		



## Tree Nut Crops

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

Pest	Rate oz/A (lb ai/A)	Instructions	Restrictions
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Obliquebanded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)	<p><b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons of finished spray per acre.</p> <p>Minimum Spray Intervals: Apply Bifenture 10WSB/DF as needed to maintain control, but do not apply at intervals sooner than 15 days.</p> <p>Observe a 21 day PHI for pecans and a 7-day PHI for all other registered tree nut crops.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>	<p>Do not apply more than 32 oz product (0.2 lb ai) per acre per application; do not apply more than 80 oz product (0.50 lb ai) per acre per season.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p>
European Red Mite Pecan Weevil Spider Mites	12.8 to 32.0 (0.08 to 0.20)		
Fire Ants Walnut Husk Fly	16.0 to 32.0 (0.10 to 0.20)		



## STORAGE AND DISPOSAL

**Pesticide Storage:** Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not allow inner bags to become wet during storage. Do not handle inner bag with wet hands or wet gloves. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### Container Handling:

[non-WSB packaging in bags] Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[non-WSB packaging in plastic jugs] Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

*[WSB packaging] Nonrefillable container. Do not reuse or refill this container. When all water soluble bags are used, the outer package should be clean and may be disposed of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If the outer container contacts formulated product in any way, it must be triple rinsed with clean water. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and close tightly. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.*



**Dealers Must Sell in Original Packages Only.**

**IMPORTANT INFORMATION  
READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.**

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 05/13/2015





## Supplemental Label

### RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

### BIFENTURE® 10 DF INSECTICIDE/MITICIDE

EPA Reg. No. 70506-227

**NOTE:** Use on grasses is limited to the States of Idaho, Oregon, and Washington.

This supplemental label expires on December 31, 2018, and must not be used or distributed after this date.

For use on Grass Forage, Fodder, and Hay Group and Grass Grown for Seed, Pasture and Rangeland (including: bahiagrass, barnyardgrass, bentgrass, Bermudagrass, Kentucky bluegrass, big bluestem, smooth brome grass, buffalograss, reed canarygrass, centipedegrass, crabgrass, cupgrass, dallisgrass, sand dropseed, Kentucky fescue, meadow foxtail, eastern gramagrass, side-oats grama, guinea grass, Indian grass, Johnsongrass, lovegrass, napiergrass, oatgrass, orchardgrass, pangolagrass, paspalum, redtop, Italian ryegrass, St. Augustine grass, sprangletop, squirreltailgrass, stargrass, switchgrass, timothy, crested wheatgrass, wildrye grass and zoysis grass. Also included are sudangrass and sorghum forages and their hybrids).

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

The supplemental labeling and the entire BIFENTURE 10DF container label, EPA Registration Number 70506-227, must be in the possession of the user at the time of the application. Read the label affixed to the container for BIFENTURE 10DF before applying. Carefully follow all precautionary statements and applicable use directions. Use BIFENTURE 10DF according to this supplemental labeling is subject to the use precautions and limitations imposed by the label affixed to the container for BIFENTURE 10DDF.

**ACCEPTED**

**05/15/2015**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended for the  
pesticide registered under  
EPA Reg. No. 70506-227

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406  
1-800-438-6071





# Supplemental Label

Pest	Rate oz/A (lbs ai/A)	Instructions	Restrictions
Alfalfa Caterpillar Alfalfa Looper Alfalfa Weevil Blue Alfalfa Aphid <sup>1</sup> Cutworms Egyptian Alfalfa Weevil (larvae & adult) Flea Beetles Green Cloverworm Green Peach Aphid <sup>1</sup> Hornworms Meadow Spittlebug Pea Aphid <sup>1</sup> Potato Leafhopper Spotted Alfalfa Aphid <sup>1</sup> Threecornered Alfalfa Hopper Velvetbean Caterpillar Webworms	5.3 to 16.0 ozs/A (0.033 to 0.1 lbs ai/A)	Apply as insects appear in sufficient volume of water to ensure thorough coverage of foliage.  Use higher specified rate for increased pest pressure or for increased residual pest control. Do not exceed maximum allowable rate.  Apply in a minimum of 2 gallons of finished spray per acre by aerial equipment or 10 gallons per acre by ground equipment.  Higher volumes of finished spray may improve insect control under higher temperatures, when foliage is dense and/or when insect pressure is high.	Do not apply more than 0.2 lbs. active ingredient per acre per season.  Do not make applications less than 14 days
Armyworm, southern Armyworm, true Armyworm, yellowstriped Ant Cereal Leaf Beetle Chinch Bug Cricket Grass Mealybug Grasshoppers Range Caterpillar Stink Bugs Armyworm, fall Black Grass Bug	8.0 to 16.0 ozs/A (0.05 to 0.1 lbs ai/A)	Applications may be made up to 30 days prior to harvest for forage and hay.  <sup>1</sup> Aphid control may be variable depending on species present and host-plant relationships.	
Hunting Bill Bug Plant Bug spp.	16.0 ozs/A (0.1 lbs ai/A)		

Read the Limitation of Warranty and Liability on the container labeling before buying or using BIFENTURE 10DF. If terms are not acceptable, return the unopened package at once to Seller for full refund of purchase price paid. Otherwise, use by Buyer or any other User constitutes acceptance of the terms of the Limitation of Warranty and Liability on the container label.

Rev. 05/13/2015

United Phosphorus, Inc.  
 630 Freedom Business Center, Suite 402  
 King of Prussia, PA 19406  
 1-800-438-6071



## Rudick, Maggie

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**From:** Sherry Hutcheson <sherry.hutcheson@uniphos.com>  
**Sent:** Tuesday, May 12, 2015 1:14 PM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227  
**Attachments:** 70506-227.20150512.Bifenture10DF cleancopy.doc; 70506-227.20150512.Bifenture10DF marked copy.doc; 20150512.Bifenture 1010DF matrix - Agency.pdf; 20150512.Bifenture 1010DF matrix - public.pdf

Maggie,  
Attached is the 227 labels (marked and clean) and the data matrices as requested for Bifenture 10DF.

Best regards,  
Sherry

Sherry Hutcheson  
Regulatory Affairs Manager  
UPI  
Office: 229-247-9041  
Mobile: 229-251-7134

On Thu, May 7, 2015 at 5:24 PM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –

There are a few line breaks which need to be removed. Additionally, you need to address product specific efficacy data on your data matrix. Efficacy data is not generic data. You can list it as Product Specific Efficacy Data –CITE ALL.

Please let me know if you have any questions!

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)



**From:** Sherry Hutcheson [mailto:[sherry.hutcheson@uniphos.com](mailto:sherry.hutcheson@uniphos.com)]  
**Sent:** Wednesday, May 06, 2015 10:42 AM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227

Maggie,

Attached are the marked and clean copies for the 10DF label.

Sherry

Sherry Hutcheson

Regulatory Affairs Manager

UPI

Office: 229-247-9041

Mobile: 229-251-7134

On Wed, Apr 29, 2015 at 4:36 PM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –

The reformatting is much more clear. I found a few very minor revisions – mostly some restrictions which were only listed in the application instructions section. Once we get these back, I'll make sure this is a quick turnaround.

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)



**From:** Sherry Hutcheson [mailto:[sherry.hutcheson@uniphos.com](mailto:sherry.hutcheson@uniphos.com)]  
**Sent:** Wednesday, April 15, 2015 5:57 PM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227

Maggie,

Received and attached are the Bifenture 10DF labels with requested changes.

I am traveling tomorrow but hope to have the EC (57) labels to you as well.

Best regards,

Sherry

Sherry Hutcheson

Regulatory Affairs Manager

UPI

Office: 229-247-9041

Mobile: 229-251-7134

On Mon, Apr 13, 2015 at 11:52 AM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –

Here are the labels for 70506-227 with your comments addressed. As for the comments on pages 5 and 10, I don't understand how maximum rates would not apply to in furrow applications.

The same revisions are needed for 70506-57 as well and these label should be reformatted.



Thank you and please let me know if you have any additional questions.

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)

**From:** Sherry Hutcheson [mailto:[sherry.hutcheson@uniphos.com](mailto:sherry.hutcheson@uniphos.com)]  
**Sent:** Monday, April 13, 2015 11:31 AM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227

Maggie,

Did you send an attachment? If so, I didn't receive the message. Could be the file is too large. Try sending one at the time if that is the case.

Sherry

Sherry Hutcheson

Regulatory Affairs Manager

UPI

Office: 229-247-9041

Mobile: 229-251-7134

On Mon, Apr 13, 2015 at 11:21 AM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –



This message kicked back, can you please confirm receipt?

Thanks!

Maggie

**From:** Rudick, Maggie  
**Sent:** Monday, April 13, 2015 11:05 AM  
**To:** 'Sherry Hutcheson'  
**Cc:** Davis, Kable  
**Subject:** RE: Electronic Label Request - EPA Reg # 70506-227

Sherry –

These labels will need to be reformatted accordingly. It is not clear which restrictions apply to each use and pest. Please let me know if you have any additional questions.

Thank you,

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)

**From:** Sherry Hutcheson [<mailto:sherry.hutcheson@uniphos.com>]  
**Sent:** Monday, March 30, 2015 12:02 PM  
**To:** Rudick, Maggie  
**Cc:** Davis, Kable  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227



Maggie,

Here are the products (since this will apply to the liquid product as well)

**BRIGADE WSB INSECTICIDE/MITICIDE**

EPA Registration Number: 279-3108



Company Number: 279

**FMC CORP. AGRICULTURAL PRODUCTS GROUP**

**ATTN: MR. MICHAEL C. ZUCKER**

**1735 MARKET ST., RM 1978**

**PHILADELPHIA PA 19103**

**215/299-5876**

Approval Date: 06-01-1995

Product Manager: Richard Gebken (703)305-6701

Percent	Active Ingredient
10.0000	Bifenthrin (128825)

---

**BRIGADE 2EC INSECTICIDE/MITICIDE**

EPA Registration Number: 279-3313



Company Number: 279

**FMC CORP. AGRICULTURAL PRODUCTS GROUP**

**ATTN: MR. MICHAEL C. ZUCKER**

**1735 MARKET ST., RM 1978**

**PHILADELPHIA PA 19103**

**215/299-5876**

Approval Date: 04-24-2006

Product Manager: Richard Gebken (703)305-6701

Percent	Active Ingredient
25.1000	Bifenthrin (128825)

Sherry Hutcheson

Regulatory Affairs Manager

UPI



Office: 229-247-9041

Mobile: 229-251-7134

On Mon, Mar 30, 2015 at 11:49 AM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –

Can you please send the Reg # for the FMC product. As for your question, yes, this is the direction we are moving for all the labels. I understand that many similar products list rates in a 'per season' fashion, this will be cleaned up during registration review, but we do require a maximum total use rate per year for the product based on our assessments.

Please let me know if you have any further questions.

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)

**From:** Sherry Hutcheson [<mailto:sherry.hutcheson@uniphos.com>]  
**Sent:** Friday, March 27, 2015 10:40 AM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-227

Maggie,

I have had an opportunity to look through the label comments, and I need some clarification and hopeful some understanding on what is required for us to do.



From the looks of the comments, EPA wants the label reformatted at this time. This label is setup similar to the FMC approved label for Brigade WSB. You will note from their label under DIRECTIONS for each crop, the same information is listed as is on our label. Please advise if all registrants are going to be required to reformat their labels too at this time, or if this is something we can do at the next submission since this was just to add one new use site; hence the supplemental label.

Regarding your comment on Page 5, #4 - 'Do these restrictions apply to the grubs/maggots, wireworm application. These restrictions are only for the FOLIAR use which applies to aphids, etc. Which is why it is the row corresponding with those pests.

On page 10, comment #1, FMC's label is set up the same way. Please advise.

on page 16, comment #3, per acre per season. This is the same as FMC's label and the way that

Please advise.

Best regards,

Sherry

Sherry Hutcheson

Regulatory Affairs Manager

UPI

Office: 229-247-9041

Mobile: 229-251-7134

On Mon, Mar 16, 2015 at 5:29 PM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:



Sherry –

Here are the revisions to be made to EPA Reg # 70506-227 (master and supplemental) labels. To summarize, minor formatting issues were requested along with clarification on per season/per year rate. We do not like to approve “per season” rates, but instead give the user a maximum use rate per year. A max yearly rate must be on your label. Additionally, throughout your directions for use, restrictions and precautions must be separated out.

Thank you!

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)

**From:** Sherry Hutcheson [mailto:[sherry.hutcheson@uniphos.com](mailto:sherry.hutcheson@uniphos.com)]  
**Sent:** Friday, January 09, 2015 4:44 PM  
**To:** Rudick, Maggie  
**Subject:** Re: Electronic Label Request - EPA Reg # 70506-57, 70506-227

Maggie,

Attached are the pdf versions of the labels as requested.

Best regards,

Sherry

Sherry Hutcheson  
Regulatory Affairs Manager



United Phosphorus, Inc.

Office: 229-247-9041

Mobile: 229-251-7134

On Fri, Jan 9, 2015 at 2:36 PM, Rudick, Maggie <[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)> wrote:

Sherry –

Can you please emailed me PDF searchable versions of your proposed labeling for the label amendments sent in Dec 17/18 for EPA Reg # 70506-57 and 70506-227?

Thank you!

Maggie Rudick  
U. S. Environmental Protection Agency  
Office of Pesticides Program  
Registration Division; Invertebrate & Vertebrate Branch I  
(703) 347-0257  
[Rudick.Maggie@epa.gov](mailto:Rudick.Maggie@epa.gov)





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

**Paperwork Reduction Act Notice:** The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instruction and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington DC 20460. Do not send the form to this address.

**DATA MATRIX**

Date: May 12, 2015	EPA Reg No./ File Symbol 70506-227	Page 1 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403		Product: Bifenture DF Insecticide
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
<b>PRODUCT SPECIFIC DATA</b>					
830.1550	Chemical identity	47813201	UPI	OWN	
830.1600	Starting Materials	47813201	UPI	OWN	
830.1650	Description of formulation process	47813201	UPI	OWN	
830.1670	Discussion of formation of impurities	47813201	UPI	OWN	
830.1750	Certified limits	47813201	UPI	OWN	
830.1800	Enforcement analytical method	47813201	UPI	OWN	
830.6302	Color	47813202	UPI	OWN	
830.6303	Physical state	47813201	UPI	OWN	
830.6304	Odor	47813201	UPI	OWN	
830.6314	Oxidation/reduction	47813201	UPI	OWN	
830.6315	flammability	47813201	UPI	OWN	
830.6316	Explosibility	47813201	UPI	OWN	
830.6317	Storage stability	47813201	UPI	OWN	
830.6319	Miscibility	47813201	UPI	OWN	
830.6320	Corrosion characteristics	47813201	UPI	OWN	
830.6321	Dielectric breakdown voltage	47813201	UPI	OWN	
830.7000	pH	47813201	UPI	OWN	
830.7100	viscosity	47813201	UPI	OWN	
830.7300	Density/relative density/bulk density	47813201	UPI	OWN	
870.1100	Acute oral toxicity	47813204	UPI	OWN	
870.1200	Acute dermal toxicity	47813205	UPI	OWN	
870.1300	Acute inhalation toxicity	47813206	UPI	OWN	

Signature 	Name and Title Sherry B. Hutcheson, Reg. Affairs Manager	Date 05/12/2015
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
WASHINGTON, D.C. 20460

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DATA MATRIX

Date: May 12, 2015	EPA Reg No./ File Symbol 70506-227	Page 2 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.2400	Eye irritation	47813207	UPI	OWN	
870.2500	Dermal irritation	47813208	UPI	OWN	
870.2600	Dermal sensitization	47813209	UPI	OWN	

Signature 	Name and Title Sherry B. Hutcheson, Reg. Affairs Manager	Date 05/12/2015
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
WASHINGTON, D.C. 20460

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DATA MATRIX

Date: May 12, 2015	EPA Reg No./ File Symbol 70506-227	Page 3 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
GENERIC DATA		CITE ALL	Nufarm Americas, Inc., The Scotts Company, FMC Corp Agricultural Products Group, Bayer Environmental Science, BASF Corp., Lebanon Seaboard Corp., MGK Co., Fuller System, Inc., Winfield Solutions, LLC, Sergeants Pet Care Products, Inc., Aceto Agricultural Chemicals Corp., SC Johnson & Son, Inc., Amvac Chemical Corp., Helena Chemical, Co., Southern States Cooperative, Inc., Nippon Soda Co., Ltd., The Andersons Lawn Fertilizer Division, Sunniland Corp., Chemsico, Lesco, Inc., Makhteshim Chemical Works, Ltd., Loveland Products, Inc., Howard Fertilizer & Chemical Co., Inc., Albaugh Inc., BASF Sparks LLC, Control Solutions, Inc., Arizona Chemical Group, Inc., Valent USA Corp., Pyrethroid Working Group, Makhteshim Agan of North America, Inc., Arysta Lifescience North America, LLC, Spray Drift Task Force, Bengal Products, Inc., Outdoor Residential Exposure Task Force, Agricultural Reentry Task Force, Sapstain Industry Group, Non-Dietary Exposure Task Force, Univar Environmental Sciences, FIFRA Endangered Species Task Force, Residential Exposure Joint Venture, Atex Inc., Agricultural Handler Exposure Task Force, Osmose Utilities Services, Inc., Ensystex II, Inc., Direct Ag Source, LLC, Tacoma Ag, LLC, Ensystex IV, Inc., Tacoma Ag, LLC, Wet & Forget USA, Ltd., Generic Endangered Species Task Force, Kaizen Technologies, LLC, Bifenthrin Task Force Steering Comm., Vive Crop Protection, Inc., Liberty Crop Protection, LLC	PAY	UPI holds memberships in the following: SDTF, ORETF, ARETF, AHETF, GESTF, and BTF.

Signature 	Name and Title Sherry B. Hutcheson, Reg. Affairs Manager	Date 05/12/2015
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
WASHINGTON, D.C. 20460

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**DATA MATRIX**

Date: May 12, 2015	EPA Reg No./ File Symbol 70506-227	Page 4 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
<b>RESIDUE DATA</b>					
860.1340	MOR: Grasses	CITE-ALL	Same as above	PAY	
<b>PRODUCT SPECIFIC EFFICACY</b>					
		CITE-ALL	Same as above	PAY	

Signature 	Name and Title Sherry B. Hutcheson, Reg. Affairs Manager	Date 05/12/2015
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<b>EPA</b> United States <b>Environmental Protection Agency</b> Washington, DC 20460		<input type="checkbox"/> <b>Registration</b> <input checked="" type="checkbox"/> <b>Amendment (fast track)</b> <input type="checkbox"/> <b>Other:</b>	OPP Identifier Number
<b>Application for Pesticide - Section I</b>			
1. Company/Product Number 70506-227		2. EPA Product Manager Richard Gebken	
4. Company/Product (Name) Bifenture 10DF		3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted	
5. Name and Address of Applicant (Include ZIP Code) <b>United Phosphorus, Inc.</b> <b>633 Freedom Business Center, Ste. 402</b> <b>King of Prussia, PA 19406</b>  <input type="checkbox"/> Check if this is a new address		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. <u>Brigade WSB</u>  Product Name <u>279-3108</u>	
<b>Section - II</b>			
<input checked="" type="checkbox"/> Amendment - Explain below. <span style="float: right;"><input type="checkbox"/> Final printed labels in response to Agency letter dated _____</span> <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <span style="float: right;"><input type="checkbox"/> "Me Too" Application</span> <input type="checkbox"/> Notification - Explain below. <span style="float: right;"><input type="checkbox"/> Other - Explain below</span>			
<b>Explanation:</b> Use additional page(s) if necessary. (For Section I and Section II.) Fast track label amendment to add use for grasses.			
<b>Section - III</b>			
1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Unit Packaging wgt.      No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Package wgt.      No. per container	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
<b>*Certification must be submitted</b>			
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	
		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other _____ <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			
<b>Section - IV</b>			
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)			
Name Sherry B. Hutcheson		Title Regulatory Affairs Manager	
		Telephone No. (Include Area Code) 229-247-9041	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received <b>(Stamped)</b>
2. Signature 		3. Title Regulatory Affairs Manager	
4. Typed Name Sherry B. Hutcheson		5. Date 12/17/2014	





**United Phosphorus, Inc.**

Sherry B. Hutcheson  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406  
Phone: (229) 247-9041

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

December 18, 2014

ATTENTION: Richard Gebken (PM 10)

**Subject: Label Amendment for Bifenture 10DF (EPA Reg. No. 70506-227)**

Dear Mr. Gebken,

United Phosphorus, Inc. (UPI) is submitting a label amendment for our product Bifenture 10DF (EPA Reg. No. 70506-227), containing bifenthrin as the active ingredient.

It is our intent to add use on grasses for the states of Idaho, Oregon and Washington. This use has already been approved and is on the Brigade WSB (EPA Reg. No. 279-3108) label which is substantially similar to our product and label.

In addition to this letter, we have included the following:

- An application form, EPA form 8570-1,
- Certificate with Respect to Data Citation, EPA form 8570-34,
- Data Matrix, Public Copy EPA form 8570-35
- Data Matrix, Agency Copy, EPA form 8570-35
- One copy of the label clearly marked
- Two clean copies of the proposed label (master label)
- Two clean copies of the proposed supplemental label

All changes are highlighted in the marked copy of the label. We believe this qualifies for a fast-track amendment and since no data are being submitted, no PRIA fee is required.

If you have any questions or comments, please feel free to contact me at [sherry.hutcheson@uniphos.com](mailto:sherry.hutcheson@uniphos.com) or 229-247-9041.

Best regards,

A handwritten signature in black ink, appearing to read 'Sherry B. Hutcheson', with a long horizontal flourish extending to the right.

Sherry B. Hutcheson  
Regulatory Affairs Manager





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**1200 Pennsylvania Avenue, N.W.**  
**WASHINGTON, D.C. 20460**

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, Collection Strategies Division (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. Do not send the completed form to this address.

**Certification with Respect to Citation of Data**

Applicant's/Registrant's Name, Address, and Telephone Number United Phosphorus, Inc., 630 Freedom Business Ctr, King of Prussia PA 19406 Tel: 227-247-9041	EPA Registration Number/File Symbol 70506-227
Active Ingredient(s) and/or representative test compound(s) Rifenthrin	Date December 17, 2014
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial crops	Product Name Bifenture 10 DF Insecticide

**NOTE:** If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

**SECTION I: METHOD OF DATA SUPPORT** (Check one method only)

<input type="checkbox"/> I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	<input checked="" type="checkbox"/> I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).
--	---

**SECTION II: GENERAL OFFER TO PAY**

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

**SECTION III: CERTIFICATION**

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

**I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.**

Signature 	Date 12/17/2014	Typed or Printed Name and Title Sherry B. Hutcheson/Regulatory Affairs Manager
---------------	--------------------	---





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

January 5, 2015

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

MS. SHERRY B. HUTCHESON  
UNITED PHOSPHORUS, INC  
630 FREEDOM BUSINESS CENTER, SUITE 402  
KING OF PRUSSIA, PA 19406-

PRODUCT NAME: BIFENTURE 10DF INSECTICIDE/MITICIDE  
COMPANY NAME: UNITED PHOSPHORUS, INC  
OPP IDENTIFICATION NUMBER:  
EPA FILE SYMBOL: 70506-227  
EPA RECEIPT DATE: 12/30/14

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application appears to qualify for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability for fast track status.

If you have any questions, please contact Registration Division, Risk Management Team 3, at (703) 306-0415.

Sincerely,

A handwritten signature in cursive script, appearing to read "Teresa Downs", is written over the typed name.

Front End Processing Staff  
Information Services Branch  
Information Technology & Resources Management Division





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 30, 2015

Rebecca Clemmer  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Subject: Condition of Registration – Storage Stability and Corrosion Characteristics  
Product Name: BIFENTURE 10DF INSECTICIDE/MITICIDE  
EPA Registration Number: 70506-227  
Application Date: January 18, 2012  
Decision Number: 460735

Dear Ms. Clemmer:

The Agency has reviewed the study submitted to fulfill the conditional data requirement referred to above, in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act. A copy of the review is enclosed. The study has been classified as acceptable. The condition of registration is considered fulfilled.

If you have any questions, please contact Maggie Rudick by phone at 703-347-0257, or via email at [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Maggie Rudick" with "for" written below it.

Kable Bo Davis, Product Manager 3  
Invertebrate & Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure: DP398616 (04/02/15)





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS  
REGISTRATION DIVISION (7505P)

DATE OUT: April 2, 2015

SUBJECT: STORAGE STABILITY (830.6317) & CORROSION CHARACTERISTICS  
(830.6320) REVIEW

ACCELERATED STUDY [ ]; ONE YEAR STUDY [X];  
OVER 1 YEAR STUDY [ ]

MP [ ] EP [X] EUP [ ]

DP BARCODE No.: 398616 REG. No.: 70506-227 FILE SYMBOL No.:

DECISION No.: 460735 MRID No(s): 487232-01

PRODUCT NAME: BIFENTURE 10DF INSECTICIDE/MITDCIDE

COMPANY: UNTITED PHOSPHORUS, INC.

FROM: Linda Mascall / Bruce Kitchens  
Product Chemistry Team  
Chemistry, Inerts and Toxicology Assessment Branch (CITAB)/RD (7505P)

TO: Melody Banks / Mark Suarez, RM 13  
Invertebrate and Vertebrate Branch 3 / RD (7505P)

I. CONCLUSIONS:

STORAGE STABILITY (830.6317):

[X] ACCEPTABLE

[ ] UNACCEPTABLE\*

[ ] UPGRADEABLE\*

40CFR158.310 DATA REQUIREMENT: [X] SATISFIED [ ] NOT SATISFIED

CORROSION CHARACTERISTICS (830.6320):

[X] ACCEPTABLE

[ ] UNACCEPTABLE\*

[ ] UPGRADEABLE\*

40CFR158.310 DATA REQUIREMENT: [X] SATISFIED [ ] NOT SATISFIED

\* If unacceptable or upgradeable describe the deficiency and provide recommendations



### Comments & Recommendations:

There was no perforation, darkening, discolouration and splitting at the seam. The pouch was silver rectangular in the shape without any cracks at 0 day as well as after 3, 6, 9 and 12 months of storage.

The appearance of bifen 10 DF was off-white, odourless granules at 0 day as well as after 3, 6, 9 and 12 months of storage.

## II. STUDY SUMMARY

### A. STUDY CONDUCTED UNDER US GLP/OECD GUIDELINES

☒ Yes

☐ No

### B. PRODUCT INFORMATION

Active ingredient(s): Bifenthrin

Label claim(s) Nominal concentration(s) (%): 10.0

Initial concentration(s) of the AI(s) (%) used in the study: 10.08

Lower certified limits (%) based on AI % in the study: 9.496

### C. EXPERIMENTAL PARAMETERS

Temperature: ☐ Freezer; Room ☐; Warehouse ☒; 54°C ☐; Other ☐

Humidity: Indicate % (if provided)

Duration of study: ☒ 1 year; ☐ over 1 year

Type of container: ☐ Glass; ☐ Metal; ☐ HDPE; ☒ Fluorinated HDPE; ☐ Other

Analysis at intervals: ☒ 0 (initial);

☒ 3 months; ☒ 6 months

☒ 9 months; ☒ 12 months

☐ Over 12 months



#### D. ANALYTICAL METHOD

Method	DETECTOR
Gas chromatography (GC)	<input type="checkbox"/> FID (Flame Ionization Detector) <input type="checkbox"/> ECD (Electron Capture Detector) <input type="checkbox"/> N/P (Nitrogen/Phosphorous Detector) <input type="checkbox"/> Other
Capillary Gas chromatography (CGC)	<input type="checkbox"/> FID (Flame Ionization Detector) <input type="checkbox"/> ECD (Electron Capture Detector) <input type="checkbox"/> N/P (Nitrogen/Phosphorous Detector) <input type="checkbox"/> Other
High Pressure Liquid chromatography (HPLC)	<input checked="" type="checkbox"/> UV/VIS (nm) - 254 (nm) <input type="checkbox"/> RI (Refractive Index) <input type="checkbox"/> Other
GC-MS / LC-MS	Specify
Other	Specify

#### E. RESULTS

##### Storage Stability and Corrosion Characteristics of Bifen 10 DF

##### Observation of Corrosion Characteristics

Characteristics		Observations at Storage Period (Months)				
		0 Day	3	6	9	12
Corrosion Characteristics	Perforation	No	No	No	No	No
	Darkening	No	No	No	No	No
	Discolouration	No	No	No	No	No
	Splitting	No	No	No	No	No
Appearance of The Container (visual)	Shape	Rectangular	Rectangular	Rectangular	Rectangular	Rectangular
	Colour	Silver	Silver	Silver	Silver	Silver
	Crack	No	No	No	No	No



## Storage Stability and Corrosion Characteristic of Bifen 10 DF

### Appearance of Test Substance

Appearance	Observation of Storage Period (Months)				
	0 Day	3	6	9	12
Color	Off-white	Off-white	Off-white	Off-white	Off-white
Physical State	Granules	Granules	Granules	Granules	Granules
Odour	Odourless	Odourless	Odourless	Odourless	Odourless

## Storage Stability and Corrosion Characteristics of Bifen 10 DF

### Calculation of Active ingredient Content

Storage Period (Months)	Replication	A.I. Content (g/kg)	Mean A.I. Content (g/kg)
0 Day	R <sup>1</sup>	102.47	102.48
		102.49	
	R <sup>2</sup>	102.45	102.44
		102.42	
	Mean		102.46
3	R <sup>1</sup>	102.38	102.38
		102.37	
	R <sup>2</sup>	102.24	102.26
		102.27	
	Mean		102.32
6	R <sup>1</sup>	102.30	102.29
		102.28	
	R <sup>2</sup>	102.22	102.24
		102.26	
	Mean		102.27
9	R <sup>1</sup>	102.26	102.25
		102.24	
	R <sup>2</sup>	102.24	102.26
		102.27	
	Mean		102.26
12	R <sup>1</sup>	102.14	102.10
		102.06	
	R <sup>2</sup>	102.13	102.14
		102.15	
	Mean		102.12



**United Phosphorus, Inc.**

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

January 18, 2012

Richard Gebken (PM 13)  
Document Processing Desk  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Bifenture 10DF Insecticide/Miticide (EPA Reg. No. 70506-227)  
Submission of Study

Dear Mr. Gebken:

As required in the Notice of Registration for the subject product, United Phosphorus, Inc. is submitting three copies of the results of storage stability/corrosion characteristics testing as follows:

48723201

Storage Stability and Corrosion Characteristics of Bifen 10DF.  
Jai Research Foundation, Study Number 9077 (final report).  
Nov. 9, 2010. OPPTS Guidelines 830.6317 and 830.6320. 79p.

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

WASHINGTON, D.C. 20460

Office of Chemical Safety  
and Pollution Prevention

March 10, 2011

Rebecca Clemmer  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Subject: Submission of New Alternate Formulation  
Bifenture 10DF Insecticide  
EPA Reg. No. 70506-227  
Your Submission Dated: November 15, 2010

Dear Ms. Clemmer:

We have no objection to the use of the alternate formulation (dated November 12, 2010) requested in your letter of the above date. The alternate Confidential Statements of Formula (CSF) is acceptable and has been inserted in the file for the subject product.

If you have any questions regarding this action, please contact BeWanda Alexander at [Alexander.bewanda@epa.gov](mailto:Alexander.bewanda@epa.gov) or (703) 305-7460.

Sincerely,

A handwritten signature in black ink that reads "BeWanda Alexander for". The signature is written in a cursive, flowing style.

Richard Gebken  
Interim Product Manager 13  
Insecticide Branch  
Registration Division (7505P)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

OPPTS/OPP/RD/TRB/PRODUCT CHEMISTRY TEAM

WASHINGTON, D.C. 20460

DATE OUT: March 7, 2011

DP BARCODE No.: 386344

File Symbol No.: 70506-227

COMPANY: UNITED PHOSPHORUS, INC

PRODUCT NAME: BIFENTURE® 10DF Insecticide/Miticide

SUBJECT: PRODUCT CHEMISTRY REVIEW OF MP[ ] EP [X]

FOOD USE: [YES] INTEGRATED FORMULATION[ ] ACTION

PCC: 128825

CODE: 345

DECISION No.: 443244

FROM: **William Herald / Microbiologist/Chemist REHS/Registered Sanitarian**  
**Product Chemistry Team**  
**Technical Review Branch/RD (7505P)**

TO: **BeWanda Alexander / Mark Suarez, RM 13**  
**Insecticide Branch / RD (7505P)**

*W. Herald*  
*S. Brown 3/9/11*

**INTRODUCTION:**

The registrant has petitioned the Agency for approval of an Alt. No. 2 CSF (dated 11/12/10) to support the registration of the end use product, BIFENTURE® 10DF Insecticide/Miticide. The newly proposed alternate CSF has listed additional carriers. TRB has been asked to evaluate the proposed Alt. No. 2 CSF formulation and determine its acceptability.

**SUMMARY OF FINDINGS**

1. The proposed end use product contains Bifenthrin Technical (99.4%) [EPA Reg. No. 70506-18] as the active ingredient with the product label claim of 10.0%.
2. The proposed Alt. No. 2 CSF (dated 11/12/10) is filled out correctly and completely. The CSF is in compliance with PR Notice 91-2, and Title 40 CFR § 152.43. The upper and lower limits of the inert ingredients are in compliance with statutory parameters recited in Title 40 CFR § 158.350 (b) (2).
3. The nominal concentration of the active ingredient recited in the Alt. No. 2 CSF (dated 11/12/10) concurs with the product label claim of nominal concentration. All of the food use inert ingredients present in the formulation have been approved by the Agency under 40 CFR § 180.920, application to growing crops (3/2/11).
4. The proposed Alt. No. 2 CSF (dated 11/12/10) is substantially similar in chemical composition and physical-chemical properties with the basic CSF (dated 7/20/09)

**CONCLUSIONS:**

The TRB has reviewed the proposed Alt. No. 2 CSF (dated 11/12/10) and has determined it to be acceptable.





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

November 15, 2010

Richard Gebken (PM 13)  
Document Processing Desk (CSF)  
Office of Pesticide Programs (H7504P)  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Ave., N.W.  
Washington, D.C., 20460

Re: Application for Alternate Formula  
Bifenture 10DF Insecticide (EPA Reg. No. 70506-227)

Dear Mr. Gebken:

United Phosphorus, Inc. is applying for an alternate formula for the subject product. There is no change in the percent of active ingredient. We have confirmed that all inerts are cleared and have no data compensation issues.

Enclosed please find:

- one copy of the proposed Confidential Statement of Formula, which is alternate #2.
- EPA Form 8570-1

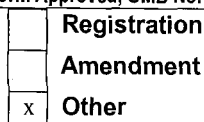
Please contact me if you have any questions.

Very truly yours,

A handwritten signature in cursive script that reads 'Rebecca A. Clemmer'.

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)





OPP Identifier Number	
-----------------------	--

1. Company/Product Number 70506-227	2. EPA Product Manager Gebken	3. Proposed Classification
4. Company/Product (Name) United Phosphorus, Inc/Bifenture 10DF Insecticide	PM # 13	<input type="checkbox"/> None <input type="checkbox"/> Restricted
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg No. _____ Product Name _____	
<input type="checkbox"/> Check if this is a new address		

<input type="checkbox"/> Amendment – Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input type="checkbox"/> Notification – Explain below	<input checked="" type="checkbox"/> Other – Explain below

Submission of application for CSF alternate 2.

1. Material This Product Will be Packaged in:					2. Type of Container	
Child-Resistant Packaging		Unit Packaging		Water Soluble Packaging		<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Yes		<input type="checkbox"/> Yes		<input type="checkbox"/> Yes		
<input type="checkbox"/> No		<input type="checkbox"/> No		<input type="checkbox"/> No		
<b>*Certification must be submitted</b>		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container	
3. Location of Net Contents Information			4. Size(s) Retail Container		5. Location of label directions	
<input type="checkbox"/> Label					<input type="checkbox"/> On Label	
<input type="checkbox"/> Container					<input type="checkbox"/> On Label accompanying product	
6. Manner in Which Label is Affixed to Product			<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____			

1. Contact Person (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name	Title	Telephone No. (Include Area Code)
Rebecca A. Clemmer	Regulatory Manager	610-491-2828

**Certification**

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law

2. Signature  
R. A. Clemmer

3. Title  
Regulatory Manager

4. Typed Name  
Rebecca A. Clemmer

5. Date  
Nov. 15, 2010

6. Date Application Received	
------------------------------	--

**(Stamped)**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

April 8, 2010

Rebecca Clemmer  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Subject: Amendment – Response per PR Notice 2007-4  
Bifenture® 10DF Insecticide/Miticide  
EPA Reg. No. 70506-227  
Your submission dated February 22, 2010 and March 2, 2010

Dear Ms. Clemmer:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. Add a legend on the front page of the master label clearly identifying the bold, italicized text and bracketed information for the reader.

If you have any questions regarding this action, please contact BeWanda Alexander at [Alexander.bewanda@epa.gov](mailto:Alexander.bewanda@epa.gov) or (703) 305-7460.

Sincerely,

A handwritten signature in cursive script that reads "BeWanda Alexander" followed by a flourish.

Richard Gebken  
Product Manager  
Insecticide Branch  
Registration Division (7505P)

Enclosure



**RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

GROUP

3

INSECTICIDE

**BIFENTURE® 10DF Insecticide/Miticide**

(primary name)

**BIFENTURE® 10WSB Insecticide/Miticide**

(alternate name)

**ACTIVE INGREDIENT:**

Bifenthrin\* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-

1-propenyl)-2,2-dimethylcyclopropanecarboxylate ..... 10.0%

**OTHER INGREDIENTS:** ..... 90.0%**TOTAL** ..... 100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated**

**APR 8 2010**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

**70506-227****KEEP OUT OF REACH OF CHILDREN****CAUTION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

**FIRST AID****If Swallowed:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**If in Eyes:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

**Note to Physician:** This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

**United Phosphorus, Inc.****630 Freedom Business Center****King of Prussia, PA 19406****1-800-438-6071 • www.upi-usa.com****EPA Reg. No. 70506-227****EPA Est. No.****Net Contents**



## PRECAUTIONARY STATEMENTS

### Hazards to Humans (and Domestic Animals)

Caution.. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment:

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

#### Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product through any type of irrigation system.

**Resistance.** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect pest may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.



Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls; waterproof gloves; and shoes plus socks.

### GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

*The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Avoid rough handling which may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.*

Bifenture WSB/DF insecticide must be diluted with water before spray application. Do not use nozzle screens (e.g. strainers) greater than 50 mesh size. *Determine the number of water soluble bag(s) to make up necessary spray suspension.*

*Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:*

$$\frac{\text{Rate for Pest (Active/Acre)}}{0.05 \text{ (amt. ai in each bag)}} \times \text{Number of Acres to be Treated} = \text{Number of Bifenture Water Soluble Bags to use for acres to be treated}$$

**Do not break bags.** When the equation equals less than a whole number of bags, use the next higher whole number of bags.

Fill the spray tank 1/2 full with water. Add required amount of Bifenture 10 WSB. Open the outer wrapper of this product and immediately dump required number of water soluble bags into the spray tank. Allow the bag(s) to dissolve completely. Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

#### Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

#### Tank-Mixture

Bifenture 10 WSB/DF Insecticide/Miticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing using a standard jar test or other similar method.

#### Buffer Zones



**Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. <http://www.in.ces.usda/v/technical/agronom/newconbuf.pdf>

**Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for ULV Aerial Application**

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for Non-ULV Aerial Application**

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to applications.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

**Spray Drift Requirements****Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

**Temperature Inversions**

Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

**Droplet Size**

Use only medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

**Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.



## Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

### Artichoke

Pest	Rate oz/A (lb ai/A)	Instructions
Artichoke Plume Moth Cribrate Weevil	16.0 (0.10)	<p>Apply when pest populations reach damaging thresholds and repeat as necessary to maintain control, but not more often than 15-day intervals.</p> <p>Do not apply more than 16 oz product (0.10 lb ai)/A between bud formation and harvest of an individual fruit.</p> <p><b>Ground Application:</b> Apply in a minimum of 75 gallons per acre.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons per acre.</p> <p>Do not apply more than 80 oz product (0.5 lb ai) per acre per season.</p> <p>Preharvest interval: 5 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>

### Brassicas

Broccoli, Chinese Broccoli, (gailon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy)

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 - 0.10)	<p><b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.</p>
Aphids Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Tobacco Budworm Saltmarsh Caterpillar Stink Bugs Thrips Wireworm (Adults)	5.3 to 16.0 (0.033 - 0.10)	<p><b>Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.</p> <p>Thorough coverage is essential to achieve control.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per season, including at-plant applications.</p> <p>Do not make applications less than 7 days apart.</p> <p>Do not make more than 5 applications after bloom.</p> <p>Preharvest interval: 7 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
Banks Grass Mite	12.8 to 16.0	



Carmine Mite <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	(0.08 - 0.10)	
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## Bushberries

Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Blueberry Maggot Fruitworms Leafhoppers Lecanium Scale (crawlers) Obliquebanded Leafroller Plum Curculio Redbanded Leafroller Spanworm Variegated Leafroller	5.3 to 16.0 (0.033 to 0.10)	Apply in at least 2 gallons per acre by air or in at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 1 day.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmine Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	



## Caneberries

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries

Pest	Rate oz/A (lb ai/A)	Instructions
Black Vine Weevil Leafrollers Orange Tortrix Root Weevils	8.0 to 16.0 (0.05 to 0.1)	Apply by air or ground equipment using sufficient water to obtain full coverage of the canopy. Use a minimum of 10 gallons per acre by air and 50 gallons per acre by ground. One application may be made pre-bloom and a second application may be made post bloom.
Carmine Mite Raspberry Crown Borer Twospotted Spider Mite	16.0 (0.1)	For Crown Borer: apply 16 oz product (0.1 lb ai) per acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/A) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 3 days. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Canola, Crambe, Rapeseed

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshopper Loopers Other Lepidopterous Larvae Plant Bug Stink Bugs Seedpod Weevil Thrips	5.3 to 6.4 (0.033 - 0.04)	Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 12.8 oz product (0.08 lb ai) per acre per season. Do not make applications less than 14 days apart. Preharvest interval: 35 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



**Citrus**

<b>Pest</b>	<b>Rate oz/A (lb ai/A)</b>	<b>Instructions</b>
BlueGreen Citrus Root Weevil Brown Leaf Notcher Diaprepes Root Weevil Fuller Rose Beetle Green Citrus Root Weevil LittleLeaf Notcher Southern Blue- Green Citrus Weevil	40.0 to 80.0 (0.25 to 0.50)	<p>Apply Bifenture 10 WSB/DF by ground equipment to bare soil beneath citrus trees. Bifenture 10 WSB/DF must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume will insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.</p> <p>Bifenture 10 WSB/DF protects citrus tree roots from Diaprepes and other citrus root weevils feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As eggs hatch in new foliage, neonates fall to the soil surface BELOW the tree and come in contact with Bifenture 10 WSB/DF as they attempt to burrow into the root zone.</p> <p>Minimize disturbance of the soil beneath trees.</p> <p>Timing of Bifenture 10 WSB/DF applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Bifenture 10 WSB/DF application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Bifenture 10 WSB/DF soil barrier in place prior to drop of the neonates.</p> <p>Bifenture 10 WSB/DF is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Apply in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.</p> <p><b>Additional Instructions:</b></p> <p>Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.</p> <p>Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.</p> <p>If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, use 80 oz product (0.50 lb ai) to obtain the longest residual management of Diaprepes root weevil.</p> <p>If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 40 oz product (0.25 lb ai) can be applied early season and 0.25 pound active can be applied later in the season.</p> <p>Do not apply through irrigation systems.</p> <p>Do not allow any application of Bifenture 10 WSB/DF to contact fruit or foliage.</p> <p>Do not apply more than a total of 80 oz product (0.5 lb ai ) per acre per year.</p> <p>Preharvest interval: 1 day.</p> <p>Apply in a minimum of 40 gallons of finished spray per acre.</p> <p>Ground application only. Do not apply by air.</p>
Asian Cockroach Fire Ants	16.0 to 40.0 (0.1 to 0.25)	



## Cotton

Pest	Rate oz/A (lb ai/A)	Instructions
European Corn Borer	3.2 to 16.0	This product may be applied in water.
Soybean (Banded)	(0.02 to 0.10)	Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by air.
Thrips		
Tobacco Thrips		
Boll Weevil	6.4 to 16.0	To control Boll Weevil: apply at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.
Bollworm	(0.04 to 0.10)	To control Mites and Aphids: apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established.
Cabbage Looper		Do not apply more than 80 oz product (0.5 lb ai) per acre per season.
Cotton Aphid		Preharvest interval: 14 days.
Cotton Fleahopper		Do not graze livestock in treated areas or cut treated crops for feed.
Cotton Leafperforator		Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.
Cutworms		
Fall Armyworm		
Plant Bugs		
Saltmarsh Caterpillar		
Southern Garden		
Leafhopper		
Stink Bugs		1 bag = 0.05 lb ai = 8 oz formulated product
Tobacco Budworm		
Beet Armyworm	9.6 to 16.0	
Carmine Spider Mite	(0.06 to 0.10)	
<i>Lygus</i> spp.		
Pink Bollworm		
Twospotted Spider		
Mite		
Whiteflies		

## Cucurbits

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza); (*Luffa* spp.) (includes hechima, Chinese okra); (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.)

Pest	Rate oz/A (lb ai/A)	Instructions
Wireworms	8.0 to 16.0	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.
Maggots	(0.05 – 0.10)	
Grubs		
Aphids	8.0 to 16.0	<b>Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.
Armyworms	(0.05 – 0.10)	



Cabbage Looper Corn Earworm Cucumber Beetles Cutworms Grasshopper Leafhoppers Plant Bug Pickleworm Melonworm Rindworm Squash Bugs Squash Vine Borer Stink Bugs Tobacco Budworm		Thorough coverage is essential to achieve control. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Do not make more than two applications after bloom. Do not make applications less than 7 days apart. Preharvest interval: 3 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmine Mite <i>Lygus</i> Spp. Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)	

## Fruiting Vegetables

Eggplant, Pepper (Bell & Non-Bell), Groundcherry, Pepino

Pest	Rate oz/A (lb ai/A)	Instructions
Armyworms Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafminers Loopers Pepper Weevil Plant Bug Stink Bug Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whiteflies	5.3 to 12.8 (0.033 to 0.08)	<p>Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.</p> <p>Do not make applications less than 7 days apart.</p> <p>Do not apply more than 32 oz product (0.2 lb ai ) per acre per season.</p> <p>Preharvest interval: 7 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
Banks Grass Mite Broad Mite Carmine Mite	12.8 (0.08)	



Lygus Spp.		
Pacific Spider Mite		
Two Spotted Spider Mite		



**Fruiting Vegetables** *(continued)*

## Tomato, Tomatillo

<b>Pest</b>	<b>Rate oz/A (lb ai/A)</b>	<b>Instructions</b>
Grubs Maggots Wireworms	8.0 to 12.8 (0.05 to 0.08)	Apply in-furrow with the seed or transplant.
Aphids Armyworms Including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm Bean Leaf Beetle Cabbageworm Carmin Mite Cloverworm Corn Earworm Corn Rootworm Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hopper Grasshopper Japanese Beetle (Adult) Leafhoppers Loopers <i>Lygus</i> Spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bug Rindworm Saltmarsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink Bug Spp. Tobacco Budworm Tarnished Plant Bug Thrips Tomato Hornworms Two Spotted Spider Mite Whiteflies	5.3 to 12.8 (0.033 to 0.08)	Apply as necessary for insect control using a minimum of 15 gallons per acre with ground. Thorough coverage is essential to achieve control. Do not make applications less than 10 days apart. A maximum of 4 applications may be applied per season. Preharvest interval: 1 day.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



## Grapes

Pest	Rate oz/A (lb ai/A)	Instructions
Cutworms Eastern Grape Leafhopper Grape Berry Moth Japanese Beetles Adults Variegated Leafhopper Western Grape Leafhopper	8.0 to 16.0 (0.05 - 0.10)	Apply in a minimum of 10 gallons by air or in a minimum of 25 gallons with ground equipment. Thorough coverage is essential to achieve control. When pest pressure is moderate to severe, use higher rate. Do not apply more than 16 oz product (0.10 lb ai) per acre per season. Preharvest interval: 30 days.
Black Vine Weevil Glassywinged Sharpshooter Twospotted Spider Mite	16.0 (0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Hops

Not for this use in California

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.10)	Do not apply more than 16 oz product (0.10 lb ai) per acre per application. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. A spray interval of 21 days between applications must be maintained.
Root Weevils	8.0 to 16.0 (0.05 to 0.10)	Preharvest interval: 14 days.
Twospotted Spider Mite	16.0 (0.10)	<b>Ground Application:</b> For best results, full coverage is essential. For early season applications use 100-150 gallons per acre. For late season applications use 200-250 gallons per acre. For Root Weevil control, make a directed spray to the base of the plant. Spray up the bine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant. <b>Air Application (for late season control of Twospotted Spider Mites):</b> Apply a minimum of 16 oz product (0.10 lb ai) per application in a minimum of 10 gallons per acre. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Leafy Petiole Vegetables

Celery, Cardoon, Chinese celery, Celtuce, Florence fennel, Rhubarb, Swiss chard

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids	5.3 to 16.0	Apply in at least 2 gallons per acre by air or at least 10 gallons per



Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whiteflies Wireworm (Adults)	(0.033 to 0.10)	acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmin Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	

**Lettuce, Head**

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bug Spp. Tobacco Budworm	5.3 to 16.0 (0.033 - 0.10)	Apply as necessary for insect control using a minimum of 20 gallons per acre with ground equipment and 5 gallons per acre by air. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Carmin Mite <i>Lygus</i> Spp. Two Spotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)	



**Mayhaw**

Pest	Rate oz/A (lb ai/A)	Instructions
Plum Curculio	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 28 gallons per acre. Do not apply more than once every 7 days. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 30 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

**Peanut**

Pest	Rate oz/A (lb ai/A)	Instructions
Beet Armyworm Corn Earworm Cutworm Spp. Fall Armyworm Grasshoppers Green Cloverworm Leafhoppers Lesser Cornstalk Borer Loopers Redneck Peanut Worm Southern Armyworm Southern Corn Rootworm Stink Bugs Threecornered Alfalfa Hopper Velvetbean Caterpillar Yellowstriped Armyworm	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16.0 oz product (0.10 lb ai) per acre at a minimum of 14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Aphids Spider Mites Thrips Whiteflies	5.12 to 16.0 (0.08 to 0.10)	

**Pears**

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Codling Moth Cutworms Green Fruitworm	6.4 to 32.0 (0.04 to 0.2)	<b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage. <b>Air Application:</b> Apply in a minimum of 10 gallons per acre by air. <del>Do not apply more than 80 oz product (0.5 pound ai) per acre per</del>



Leafhoppers		season with no more than 0.45 pound ai per acre applied after petal fall. Apply as needed to maintain control using a minimum of 30-day spray interval. Preharvest interval: 14 days. Do not graze livestock in treated orchards or cut treated cover crops for feed.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Leafminers		
Leafrollers		
<i>Lygus</i> Spp.		
Plant Bugs		
Plum Curculio		
San Jose Scale (Crawlers)		
Stink Bugs		
Tarnished Plant Bugs		
Yellow Spider Mite	9.6 to 32.0 (0.06 to 0.2)	
European Red Mite	12.8 to 32.0 (0.08 to 0.2)	
Twospotted Spider Mite		

### Root Crops (except sugarbeets)

Crops	Pest	Rate oz/A (lb ai/A)	Instructions
Burdock, edible Carrot Celeriac Chervil, turnip rooted Chicory Ginseng Horseradish Parsley, turnip rooted Parsnip Radish Radish, oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Aphids Beet Armyworm Celery Leaf-tier Corn Earworm Cross-striped Cabbageworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Fire Ants Green Cloverworm Hornworms Imported Cabbageworm Loopers Southern Armyworm Tobacco Budworm Velvetbean Caterpillar Yellowstriped Armyworm Spider Mites Whiteflies	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 21 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Garden Beet	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. Preharvest interval: 1 day.



**Soybean**

<b>Pest</b>	<b>Rate oz/A (lb ai/A)</b>	<b>Instructions</b>
Soybean Aphid	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16 oz product (0.10 lb ai) per acre at a minimum of 30 day intervals.
Spider Mites	12.8 to 16.0 (0.08 to 0.10)	Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Preharvest interval: 18 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

**Spinach**

<b>Pest</b>	<b>Rate oz/A (lb ai/A)</b>	<b>Instructions</b>
Armyworms Colorado Potato Beetle Corn Earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips Tomato Pinworm Tomato Hornworm	5.3 to 16.0 (0.033 to 0.10)	For control of fire ants apply Bifenture 10 WSB/DF to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications. Preharvest interval: 40 days. Apply in 5-50 gallons per acre by air or 10-50 gallons finished spray per acre by ground. Do not make applications less than 7 days apart. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. For control of Whiteflies apply foliar treatments of Bifenture 10 WSB/DF by ground or air at rates up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications.
Broad Mite Banks Grass Mite Carmin Mite Fire Ants <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 to 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



## Strawberries

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Flea beetles <i>Heliothis</i> Spp. Leafrollers <i>Lygus</i> Spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds. Repeat as necessary at 7-14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 0 days. <b>Ground Application:</b> Apply in a minimum of 50 gallons per acre. <b>Air Application (prohibited in Florida):</b> Apply in a minimum of 5 gallons per acre.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Black Vine Weevil Strawberry Root Weevil	8.0 to 32.0 (0.05 to 0.2)	
Spider Mites	16.0 to 32.0 (0.10 to 0.2)	

**CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS:** Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Bifenture 10WSB/DF greater than 0.10 lb ai/acre, harvesters must wear gloves for five (5) days following application.

## Succulent Peas and Beans

Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea; Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean; Jackbean; Soybean (immature seed); Sword bean

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 - 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant. <b>Foliar Use:</b> Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.
Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	4.0 to 16.0 (0.025 - 0.10)	Do not apply more than 32 oz product (0.2 lb ai) per acre per season including at plant applications. Preharvest interval: 3 days.
Adult Sap Beetle Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Cloverworm	5.3 to 16.0 (0.033 - 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



Corn Earworm	
Corn Rootworm Adult	
Cucumber Beetles	
Cutworms	
European Corn Borer	
Fall Armyworm	
Japanese beetle	
Loopers	
Pea Leaf Weevil	
Pea Weevil	
Plant Bug	
Southern Armyworm	
Stink Bugs	
Tarnished Plant Bug	
Thrips	
Yellowstriped Armyworm	
Webworms	
Western Bean Cutworm	
Banks Grass Mite	12.8 to 16.0
Carminc Mite	(0.08 - 0.10)
<i>Lygus</i> Spp.	
Twospotted Spider Mite	
Whiteflies	



## Tree Nut Crops

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

Pest	Rate oz/A (lb ai/A)	Instructions
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Obliquebanded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)	<p><b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons of finished spray per acre.</p> <p>Minimum Spray Intervals: Apply Bifenture 10WSB/DF as needed to maintain control, but do not apply at intervals sooner than 15 days.</p> <p>Observe a 21 day PHI for pecans and a 7-day PHI for all other registered tree nut crops.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per application; do not apply more than 80 oz product (0.50 lb ai) per acre per season.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
European Red Mite Pecan Weevil Spider Mites	12.8 to 32.0 (0.08 to 0.20)	
Fire Ants Walnut Husk Fly	16.0 to 32.0 (0.10 to 0.20)	



## STORAGE AND DISPOSAL

**Pesticide Storage:** Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not allow inner bags to become wet during storage. Do not handle inner bag with wet hands or wet gloves. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### Container Disposal:

[non-WSB packaging in bags] Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[non-WSB packaging in plastic jugs] Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

*[WSB packaging] Nonrefillable container. Do not reuse or refill this container. When all water soluble bags are used, the outer package should be clean and may be disposed of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If the outer container contacts formulated product in any way, it must be triple rinsed with clean water. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and close tightly. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.*

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## Dealers Must Sell in Original Packages Only.

### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.



**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.**

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 3/1/10



**RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms.  
For retail sale to and use only by certified applicators, or  
persons under their direct supervision and only for those  
uses covered by the certified applicator's certification.

**GROUP 3 INSECTICIDE**

***Bifenture™ 10DF***

Insecticide/Miticide

**ACTIVE INGREDIENT:**

Bifenthrin\* (2-methyl[1,1'-biphenyl]-3-yl) methyl 3-  
(2-chloro-3,3,3-trifluoro-1-propenyl)-2,  
2-dimethylcyclopropanecarboxylate ..... 10.0%

**OTHER INGREDIENTS:** ..... 90.0%

**TOTAL** ..... 100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

**KEEP OUT OF REACH OF CHILDREN  
CAUTION PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique  
a usted en detalle. (If you do not understand the label, find someone to explain it to  
you in detail.)

See inside for First Aid, Precautionary Statements, and Directions For Use.



**United Phosphorus, Inc.**  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406  
1-800-438-6071 • [www.upi-usa.com](http://www.upi-usa.com)

**Net Contents: 2.5 lbs.**

EPA Reg. No. 70506-227



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#### FIRST AID

##### If Swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

##### If in Eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

##### If on Skin or Clothing:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

**Note to Physician:** This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

#### PRECAUTIONARY STATEMENTS

##### Hazards to Humans (and Domestic Animals)

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

##### Personal Protective Equipment:

**Applicators and other handlers (other than mixers and loaders) must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks



**Mixers and Loaders must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.



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#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product through any type of irrigation system.

**Resistance.** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect pest may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls; waterproof gloves; and shoes plus socks.



### GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

Bifenture 10DF Insecticide/Miticide must be diluted with water before spray application. Do not use nozzle screens (e.g. strainers) greater than 50 mesh size.

Fill the spray tank 1/2 full with water. Add required amount of Bifenture 10DF. Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

#### Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

#### Tank-Mixture

Bifenture 10DF Insecticide/Miticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing using a standard jar test or other similar method.

#### Buffer Zones

##### Vegetative Buffer Strip

Construct and maintain a minimum 10-foot wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*. Natural Resources Conservation Services. USDA,



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NRCS. 2000. Fort Worth, Texas. 21 pp. <http://www.in.ces.usda/v/technical/agronom/newconbuf.pdf>.

**Buffer Zone for Ground Application (ground-boom, overhead chemigation, or airblast)**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for ULV Aerial Application**

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Buffer Zone for Non-ULV Aerial Application**

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

**Spray Drift Requirements**

**Wind Direction and Speed**

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

**Temperature Inversions**

Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

**Droplet Size**

Use only medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.



Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

#### **Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to applications.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

#### **Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

#### **Application Instructions**

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.



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**Artichoke**

Pest	Rate oz/A (lb ai/A)
Artichoke Plume Moth, Cribate Weevil	16.0 (0.10)

**Instructions:** Apply when pest populations reach damaging thresholds and repeat as necessary to maintain control, but not more often than 15-day intervals.

Do not apply more than 16 oz product (0.10 lb ai)/A between bud formation and harvest of an individual fruit.

**Ground Application:** Apply in a minimum of 75 gallons per acre.

**Air Application:** Apply in a minimum of 10 gallons per acre.

Do not apply more than 80 oz product (0.5 lb ai) per acre per season.

Preharvest interval: 5 days.

**Brassicas**

Broccoli, Chinese Broccoli, (gailon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy)

Pest	Rate oz/A (lb ai/A)
Grubs, Maggots, Wireworms	8.0 to 16.0 (0.05 to 0.10)
<b>Instructions: Planting Time Use:</b> For Wireworms, Maggots or Grubs, apply in-furrow with the seed or transplant.	
Aphids, Armyworms, Crickets, Corn Earworm, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Ground Beetles, Imported Cabbageworm, Leafhoppers, Loopers, Tobacco Budworm, Saltmarsh Caterpillar, Stink Bugs, Thrips, Wireworm (Adults)	5.3 to 16.0 (0.033 to 0.10)
Banks Grass Mite, Carmine Mite, <i>Lygus</i> spp., Pacific Spider Mite, Twospotted Spider Mite, Whiteflies	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions: Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.	
Do not apply more than 32 oz product (0.2 lb ai) per acre per season, including at-plant applications.	
Do not make application less than 7 days apart.	
Do not make more than 5 applications after bloom.	
Preharvest interval: 7 days.	



**Bushberries**

Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry

Pest	Rate oz/A (lb ai/A)
Aphids, Blueberry Maggot, Fruitworms, Leafhoppers, Lecanium Scale (Crawlers), Obliquebanded Leafroller, Plum Curculio, Redbanded Leafroller, Spanworm, Variegated Leafroller	5.3 to 16.0 (0.033 to 0.10)
Banks Grass Mite, Carmine Mite, <i>Lygus</i> spp., Pacific Spider Mite, Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)

**Instructions:** Apply in at least 2 gallons per acre by air or in at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.

Do not apply more than 80 oz product (0.5 lb ai) per acre per season.

Do not make applications less than 7 days apart.

Preharvest interval: 1 day.

**Caneberries**

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries

Pest	Rate oz/A (lb ai/A)
Black Vine Weevil, Leafrollers, Orange Tortrix, Root Weevils	8.0 to 16.0 (0.05 to 0.10)
Carmine Mite, Raspberry Crown Borer, Twospotted Spider Mite	16.0 (0.10)

**Instructions:** Apply by air or ground equipment using sufficient water to obtain full coverage of the canopy. Use a minimum of 10 gallons per acre by air and 50 gallons per acre by ground.

One application may be made pre-bloom and a second application may be made post bloom.

For Crown Borer: Apply 16 oz product (0.10 lb ai) per acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/A) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications.

Do not apply more than 32 oz product (0.2 lb ai) per acre per season.

Preharvest interval: 3 days.



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**Canola, Crambe, Rapeseed**

Pest	Rate oz/A (lb ai/A)
Aphids, Armyworms, Cutworms, Diamondback Moth, Flea Beetle, Flea Hopper, Grasshopper, Loopers, Other Lepidopterous Larvae, Plant Bug, Stink Bugs, Seedpod Weevil, Thrips	5.3 to 6.4 (0.033 to 0.04)

**Instructions:** Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.

Thorough coverage is essential to achieve control.

Do not apply more than 12.8 oz product (0.08 lb ai) per acre per season.

Do not make applications less than 14 days apart.

Preharvest interval: 35 days.

**Citrus**

Pest	Rate oz/A (lb ai/A)
Blue-Green Citrus Root Weevil, Brown Leaf Notcher, Diaprepes Root Weevil, Fuller Rose Beetle, Green Citrus Root Weevil, Little Leaf Notcher, Southern Blue-Green Citrus Weevil	40.0 to 80.0 (0.25 to 0.50)
Asian Cockroach, Fire Ants	16.0 to 40.0 (0.10 to 0.25)

**Instructions:** Apply Bifenxure 10DF by ground equipment to bare soil beneath citrus trees. Bifenxure 10DF must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume will insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well. Bifenxure 10DF protects citrus tree roots from Diaprepes and other citrus root weevils feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As eggs hatch in new foliage, neonates fall to the soil surface BELOW the tree and come in contact with Bifenxure 10DF as they attempt to burrow into the root zone.

continued



**Citrus** *continued*

Minimize disturbance of the soil beneath trees.

Timing of Bifenture 10DF applications is critical. Current information suggests that peak emergence of adult *Diaprepes Weevil* varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for *Diaprepes*, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Bifenture 10DF application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Bifenture 10DF soil barrier in place prior to drop of the neonates.

Bifenture 10DF is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Apply in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.

**Additional Instructions:**

Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.

Peak emergence of *Diaprepes Root Weevil* generally occurs in the spring. Depending on weather conditions, a minor emergence of *Diaprepes Root Weevil* may also occur in the fall.

If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, use 80 oz product (0.50 lb ai) to obtain the longest residual management of *Diaprepes Root Weevil*.

If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 40 oz product (0.25 lb ai) can be applied early season and 0.25 pound active can be applied later in the season.

Do not apply through irrigation systems.

Do not allow any application of Bifenture 10DF to contact fruit or foliage.

Do not apply more than a total of 80 oz product (0.5 lb ai) per acre per year.

Preharvest interval: 1 day.

Apply in a minimum of 40 gallons of finished spray per acre.

Ground application only. Do not apply by air.



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### Cotton

Pest	Rate oz/A (lb ai/A)
European Corn Borer, Soybean (Banded) Thrips, Tobacco Thrips	3.2 to 16.0 (0.02 to 0.10)
Boll Weevil, Bollworm, Cabbage Looper, Cotton Aphid, Cotton Fleahopper, Cotton Leafperforator, Cutworms, Fall Armyworm, Plant Bugs, Saltmarsh Caterpillar, Southern Garden Leafhopper, Stink Bugs, Tobacco Budworm	6.4 to 16.0 (0.04 to 0.10)
Beet Armyworm, Carmine Spider Mite, <i>Lygus</i> spp., Pink Bollworm, Twospotted Spider Mite, Whiteflies	9.6 to 16.0 (0.06 to 0.10)
<b>Instructions:</b> This product may be applied in water. Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by air. To control Boll Weevil: Apply at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. To control Mites and Aphids: Apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days. Do not graze livestock in treated areas or cut treated crops for feed. Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.	



**Cucurbits**

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza); (*Luffa* spp.) (includes hechimia, Chinese okra); (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.)

Pest	Rate oz/A (lb ai/A)
Wireworms, Maggots, Grubs	8.0 to 16.0 (0.05 to 0.10)
<b>Instructions: Planting Time Use:</b> For Wireworms, Maggots or Grubs, apply in-furrow with the seed or transplant.	
Aphids, Armyworms, Cabbage Looper, Corn Earworm, Cucumber Beetles, Cutworms, Grasshopper, Leafhoppers, Plant Bug, Pickleworm, Melonworm, Rindworm, Squash Bugs, Squash Vine Borer, Stink Bugs, Tobacco Budworm	8.0 to 16.0 (0.05 to 0.10)
Banks Grass Mite, Carmine Mite, <i>Lygus</i> spp., Twospotted Spider Mite, Whiteflies	12.8 to 16.0 (0.08 to 0.10)

**Instructions: Foliar Use:** Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.

Thorough coverage is essential to achieve control.

Do not apply more than 48 oz product (0.3 lb ai) per acre per season.

Do not make more than two applications after bloom.

Do not make applications less than 7 days apart.

Preharvest interval: 3 days.



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# **Fruiting Vegetables**

Eggplant, Pepper (Bell & Non-Bell), Groundcherry, Pepino

Pest	Rate oz/A (lb ai/A)
Armyworms, Cabbage Looper, Colorado Potato Beetle, Corn Earworm, Cucumber Beetle, Cutworms, European Corn Borer, Flea Beetle, Leafminers, Loopers, Pepper Weevil, Plant Bug, Stink Bug, Thrips, Tomato Pinworm, Tomato Hornworm, Vegetable Leafminer, Whiteflies	5.3 (0.033)
Banks Grass Mite, Broad Mite, Carmine Mite, <i>Lygus</i> spp., Pacific Spider Mite, Twospotted Spider Mite	12.8 (0.08)
<b>Instructions:</b> Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 7 days.	



### Fruiting Vegetables

Tomato, Tomatillo

Pest	Rate oz/A (lb ai/A)
Grubs, Maggots, Wireworms	8.0 to 12.8 (0.05 to 0.08)

**Instructions:** Apply in-furrow with the seed or transplant.

Aphids, Armyworms (Including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm), Bean Leaf Beetle, Cabbageworm, Carmine Mite, Cloverworm, Corn Earworm, Corn Rootworm, Cucumber Beetles, Cutworms, Diamondback Moth, European Corn Borer, Flea Beetles, Flea Hopper, Grasshopper, Japanese Beetle (Adults), Leafhoppers, Loopers, <i>Lygus</i> spp., Melonworm, Pea Weevil, Pea Leaf Weevil, Pickleworm, Plant Bug, Rindworm, Saltmarsh Caterpillar, Sap Beetle, Seedpod Weevil, Squash Bugs, Stink Bug spp., Tobacco Budworm, Tarnished Plant Bug, Thrips, Tomato Hornworms, Twospotted Spider Mite, Whiteflies	5.3 to 12.8 (0.033 to 0.08)
---	-----------------------------

**Instructions:** Apply as necessary for insect control using a minimum of 15 gallons per acre with ground equipment.

Thorough coverage is essential to achieve control.

Do not make applications less than 10 days apart.

A maximum of 4 applications may be applied per season.

Preharvest interval: 1 day.



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# **Grapes**

Pest	Rate oz/A (lb ai/A)
Cutworms, Eastern Grape Leafhopper, Grape Berry Moth, Japanese Beetles (Adults), Variegated Leafhopper, Western Grape Leafhopper	8.0 to 16.0 (0.05 to 0.10)
Black Vine Weevil, Glassywinged Sharpshooter, Twospotted Spider Mite	16.0 (0.10)

**Instructions:** Apply in a minimum of 10 gallons by air or in a minimum of 25 gallons with ground equipment.

Thorough coverage is essential to achieve control.

When pest pressure is moderate to severe, use higher rate.

Do not apply more than 16 oz product (0.10 lb ai) per acre per season.

Preharvest interval: 30 days.



**Hops**

Not for this use in California

Pest	Rate oz/A (lb ai/A)
Aphids, Armyworms, Cutworms, Leafrollers, Loopers	9.6 to 16.0 (0.06 to 0.10)
Root Weevils	8.0 to 16.0 (0.05 to 0.10)
Twospotted Spider Mite	16.0 (0.10)

**Instructions:** Do not apply more than 16 oz product (0.10 lb ai) per acre per application.

Do not apply more than 48 oz product (0.3 lb ai) per acre per season.

A spray interval of 21 days between applications must be maintained.

Preharvest interval: 14 days.

**Ground Application:** For best results, full coverage is essential. For early season applications use 100-150 gallons per acre. For late season applications use 200-250 gallons per acre.

For Root Weevil control, make a directed spray to the base of the plant. Spray up the bine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant.

**Air Application (for late season control of Twospotted Spider Mites):**

Apply a minimum of 16 oz product (0.10 lb ai) per application in a minimum of 10 gallons per acre.



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# **Leafy Petiole Vegetables**

Celery, Cardoon, Chinese celery, Celtuce, Florence fennel, Rhubarb, Swiss chard

Pest	Rate oz/A (lb ai/A)
Aphids, Armyworms, Crickets, Corn Earworm, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Ground Beetles, Imported Cabbageworm, Leafhoppers, Loopers, Saltmarsh Caterpillar, Stink Bugs, Thrips, Tobacco Budworm, Whiteflies, Wireworm (Adults)	5.3 to 16.0 (0.033 to 0.10)
Banks Grass Mite, Carmine Mite, <i>Lygus</i> spp., Pacific Spider Mite, Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> Apply in at least 2 gallons per acre by air or at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 7 days.	



### Lettuce, Head

Pest	Rate oz/A (lb ai/A)
Aphids, Armyworms, Corn Earworm, Cucumber Beetles, Cutworms, Diamondback Moth, Flea Beetles, Imported Cabbageworm, Leafhoppers, Looper, Saltmarsh Caterpillar, Stink Bug spp., Tobacco Budworm	5.3 to 16.0 (0.033 to 0.10)
Carmine Mite, <i>Lygus</i> spp., Twospotted Spider Mite, Whiteflies	12.8 to 16.0 (0.08 to 0.10)

**Instructions:** Apply as necessary for insect control using a minimum of 20 gallons per acre with ground equipment and 5 gallons per acre by air.  
 Thorough coverage is essential to achieve control.  
 Do not make applications less than 7 days apart.  
 Do not apply more than 80 oz product (0.5 lb ai) per acre per season.  
 Preharvest interval: 7 days.

### Mayhaw

Pest	Rate oz/A (lb ai/A)
Plum Curculio	12.8 to 16.0 (0.08 to 0.10)

**Instructions:** Make foliar applications in at least 28 gallons per acre.  
 Do not apply more than once every 7 days.  
 Do not apply more than 32 oz product (0.2 lb ai) per acre per season.  
 Preharvest interval: 30 days.



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# **Peanut**

Pest	Rate oz/A (lb ai/A)
Beet Armyworm, Corn Earworm, Cutworm spp., Fall Armyworm, Grasshoppers, Green Cloverworm, Leafhoppers, Lesser Cornstalk Borer, Loopers, Redneck Peanut Worm, Southern Armyworm, Southern Corn Rootworm, Stink Bugs, Threecornered Alfalfa Hopper, Velvetbean Caterpillar, Yellowstriped Armyworm	5.3 to 16.0 (0.033 to 0.10)
Aphids, Spider Mites, Thrips, Whiteflies	5.12 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> Make foliar applications in at least 10 gallons per acre at the rate of 16.0 oz product (0.10 lb ai) per acre at a minimum of 14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days.	



# Pears

Pest	Rate oz/A (lb ai/A)
Aphids, Codling Moth, Cutworms, Green Fruitworm, Leafhoppers, Leafminers, Leafrollers, <i>Lygus</i> spp., Plant Bugs, Plum Curculio, San Jose Scale (Crawlers), Stink Bugs, Tarnished Plant Bugs	6.4 to 32.0 (0.04 to 0.2)
Yellow Spider Mite	9.6 to 32.0 (0.06 to 0.2)
European Red Mite, Twospotted Spider Mite	12.8 to 32.0 (0.08 to 0.2)

**Instructions: Ground Application:** Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.

**Air Application:** Apply in a minimum of 10 gallons per acre by air.

Do not apply more than 80 oz product (0.5 pound ai) per acre per season with no more than 0.45 pound ai per acre applied after petal fall. Apply as needed to maintain control using a minimum of 30-day spray interval.

Preharvest interval: 14 days.

Do not graze livestock in treated orchards or cut treated cover crops for feed.



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**Root Crops**

(except sugarbeets)

Crops	Pest	Rate oz/A (lb ai/A)
Burdock, edible; Carrot; Celeriac; Chervil, turnip rooted; Chicory; Ginseng; Horseradish; Parsley, turnip rooted; Parsnip; Radish; Radish, oriental; Rutabaga; Salsify; Salsify, black; Salsify, Spanish; Skirret; Turnip	Aphids, Beet Armyworm, Celery Leafminer, Corn Earworm, Cross-striped Cabbageworm, Cutworms, Diamondback Moth, European Corn Borer, Fall Armyworm, Fire Ants, Green Cloverworm, Hornworms, Imported Cabbageworm, Looper, Southern Armyworm, Tobacco Budworm, Velvetbean Caterpillar, Yellowstriped Armyworm, Spider Mites, Whiteflies	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 21 days.		
Garden Beet	Aphids, Fire Ants, Flea Beetles, Lepidopterous Larvae, Spider Mites, Whiteflies	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. Preharvest interval: 1 day.		



**Soybean**

Pest	Rate oz/A (lb ai/A)
Soybean Aphid	5.3 to 16.0 (0.033 to 0.10)
Spider Mites	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> Make foliar applications in at least 10 gallons per acre at the rate of 16 oz product (0.10 lb ai) per acre at a minimum of 30 day intervals. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Preharvest interval: 18 days.	

**Spinach**

Pest	Rate oz/A (lb ai/A)
Armyworms, Colorado Potato Beetle, Corn Earworm, Cucumber Beetles, Cutworms, European Corn Borer, Flea Beetles, Leafminers, Loopers, Pepper Weevil, Thrips, Tomato Pinworm, Tomato Hornworm	5.3 to 16.0 (0.033 to 0.10)
Broad Mite, Banks Grass Mite, Carmine Mite, Fire Ants, <i>Lygus</i> spp., Pacific Spider Mite, Twospotted Spider Mite, Whiteflies	12.8 to 16.0 (0.08 to 0.10)
<b>Instructions:</b> For control of Fire Ants apply Bifenture 10DF to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications. Preharvest interval: 40 days. Apply in 5-50 gallons per acre by air or 10-50 gallons finished spray per acre by ground. Do not make applications less than 7 days apart. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. For control of Whiteflies apply foliar treatments of Bifenture 10DF by ground or air at rates up to 16 oz product (0.10 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications.	



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### Strawberries

Pest	Rate oz/A (lb ai/A)
Aphids, Armyworms, Fleabeetles, <i>Heliothis</i> spp., Leafrollers, <i>Lygus</i> spp., Plant Bugs, Spittlebugs, Stink Bugs, Strawberry Clipper, Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)
Black Vine Weevil, Strawberry Root Weevil	8.0 to 32.0 (0.05 to 0.2)
Spider Mites	16.0 to 32.0 (0.10 to 0.2)

**Instructions:** Apply when pest populations reach damaging thresholds. Repeat as necessary at 7-14 day intervals.

Do not apply more than 80 oz product (0.5 lb ai) per acre per season.

Preharvest interval: 0 days.

**Ground Application:** Apply in a minimum of 50 gallons per acre.

**Air Application (prohibited in Florida):** Apply in a minimum of 5 gallons per acre.

**CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS:** Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Bifenture 10DF greater than 0.10 lb ai/acre, harvesters must wear gloves for five (5) days following application.



**Succulent Peas and Beans**

Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea; Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean; Jackbean; Soybean (immature seed); Sword bean

Pest	Rate oz/A (lb ai/A)
Grubs, Maggots, Wireworms	8.0 to 16.0 (0.05 to 0.10)
Aster Leafhopper, Flea Beetle, Grasshoppers, Leafhoppers	4.0 to 16.0 (0.025 to 0.10)
Adult Sap Beetle, Alfalfa Caterpillar, Aphids, Bean Leaf Beetle, Beet Armyworm, Cloverworm, Corn Earworm, Corn Rootworm (Adults), Cucumber Beetles, Cutworms, European Corn Borer, Fall Armyworm, Japanese Beetle, Loopers, Pea Leaf Weevil, Pea Weevil, Plant Bug, Southern Armyworm, Stink Bugs, Tarnished Plant Bug, Thrips, Yellowstriped Armyworm, Webworms, Western Bean Cutworm	5.3 to 16.0 (0.033 to 0.10)
Banks Grass Mite, Carmine Mite, <i>Lygus</i> spp., Twospotted Spider Mite, Whiteflies	12.8 to 16.0 (0.08 to 0.10)

**Instructions: Planting Time Use:** For Wireworms, Maggots or Grubs, apply in-furrow with the seed or transplant.

**Foliar Use:** Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.

Thorough coverage is essential to achieve control.

Do not apply more than 32 oz product (0.2 lb ai) per acre per season including at plant applications.

Preharvest interval: 3 days.



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**Tree Nut Crops**

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

Pest	Rate oz/A (lb ai/A)
Black Pecan Aphid, Codling Moth, Filbert Worm, Hickory Shuckworm, Leaf-footed Bugs, Navel Orangeworm, Obliquebanded Leafroller, Peach Twig Borer, Pecan Leaf Casebearer, Pecan Nut Casebearer, Pecan Phylloxera, Plant Bugs, Stink Bugs, Walnut Aphid, Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)
European Red Mite, Pecan Weevil, Spider Mites	12.8 to 32.0 (0.08 to 0.20)
Fire Ants, Walnut Husk Fly	16.0 to 32.0 (0.10 to 0.2)

**Instructions: Ground Application:** Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.

**Air Application:** Apply in a minimum of 10 gallons of finished spray per acre.

Minimum Spray Intervals: Apply Bifenure 10DF as needed to maintain control, but do not apply at intervals sooner than 15 days.

Observe a 21 day PHI for pecans and a 7-day PHI for all other registered tree nut crops.

Do not apply more than 32 oz product (0.2 lb ai) per acre per application; do not apply more than 80 oz product (0.50 lb ai) per acre per season.

Do not graze livestock in treated orchards or cut treated cover crops for feed.



### STORAGE AND DISPOSAL

**Pesticide Storage:** Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

**Container Disposal:**

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Dealers Must Sell in Original Packages Only.**



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**IMPORTANT INFORMATION  
READ BEFORE USING PRODUCT  
CONDITIONS OF SALE AND  
LIMITATION OF WARRANTY  
AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.**

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

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Rev. 7/09  
xxxxxxx 70506-227(022810-3693)



# **RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms.  
For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

**GROUP 3 INSECTICIDE**

## **BIFENTURE™ 10DF Insecticide/Miticide**

**ACTIVE INGREDIENT:** Bifenthrin\* (2-methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate..... 10.0%

**OTHER INGREDIENTS:**..... 90.0%

**TOTAL** ..... 100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

## **KEEP OUT OF REACH OF CHILDREN CAUTION PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

### **FIRST AID**

#### **If Swallowed:**

• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.

#### **If in Eyes:**

• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

#### **If on Skin or Clothing:**

• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

**Note to Physician:** This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For chemical emergency: spill, leak, exposure, or accident, call CHEMTREC at 1-800-424-9300.

### **PRECAUTIONARY STATEMENTS Hazards to Humans (and Domestic Animals)**

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

See attached booklet for additional Precautionary Statements, Directions For Use, and Storage And Disposal.

Bifenture is a trademark of United Phosphorus, Inc.  
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**United Phosphorus, Inc.**  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406  
1-800-438-6071 • www.upi-usa.com

**Net Contents:  
2.5 lbs.**

**EPA Reg. No. 70506-227**  
xxxxxxxxx 70506-227(022810-3693)

↑  
**OPEN HERE**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 25 2010

Ms. Rebecca Clemmer  
United Phosphorus, Inc.  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

Subject: Label Notification(s)

Dear: Ms. Clemmer:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated March 2, 2010 for the product Bifenture 10 WSB/10DF (EPA Reg. No. 70506-227).

The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested does not clearly fall within the scope of PRN 98-10 and will require additional administrative review of the related files. A summary of our findings include:

Please be advised that PRN's are provided as guidance; they are not considered regulation by the Agency. Therefore, the RD reserves the right to make the above determination and concludes that this action must be submitted by you as an amendment. No further processing of this action will occur until a resubmission is made. The RD has determined that this action is denied and our records have been updated accordingly.


If you have any questions, please contact Regina Foushee-Smith at 703-305-6249.

Sincerely,

A handwritten signature in dark ink, which appears to read "Richard Gebken", is written over a faint, larger signature that reads "Debra Alexander".

Richard Gebken  
Product Manager  
Insecticide Branch  
Registration Division (7505P)



 <b>United States</b> <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
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**Application for Pesticide – Section I**

1. Company/Product Number 70506-277	2. EPA Product Manager Gebken	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) United Phosphorus, Inc/Bifenture 10 WSB/DF Insecticide/Miticide	PM # 13	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg No. _____ Product Name _____
<input type="checkbox"/> Check if this is a new address		

**Section - II**

<input type="checkbox"/> Amendment – Explain below  <input type="checkbox"/> Resubmission in response to Agency letter dated _____  <input checked="" type="checkbox"/> Notification – Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application  <input type="checkbox"/> Other – Explain below
--	---

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)


Addition of wording for an additional container type.

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PRN 2007-4 and the requirements of EPA's regulations at 40CFR§§156.10, 156.140, 156.144, 156.146, 156.156. No other changes have been made to the labeling or the CSF for this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the sections above, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section III**

1. Material This Product Will be Packaged in:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
*Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 2.5 lb plastic jug		5. Location of label directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Label accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

**Section IV**

1. Contact Person (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Rebecca A. Clemmer	Title Regulatory Manager	Telephone No. (Include Area Code) 610-491-2828	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received   <b>(Stamped)</b>
2. Signature 		3. Title Regulatory Manager	
4. Typed Name Rebecca A. Clemmer		5. Date March 2, 2010	





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

March 2, 2010

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Bifenture 10 WSB/10DF Insecticide/Miticide (EPA Reg. No. 70506-227)  
Notification of additional container type

To Whom It May Concern:

United Phosphorus, Inc. is submitting this Notification to add container disposal instructions to cover the option of packaging this product in plastic jugs rather than bags. In support, enclosed you will find:



- EPA form 8570-1
- Label copy marked to show changes

Please contact me if you have any questions.

Very truly yours,

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)



 <div style="display: inline-block; text-align: center;"> <b>United States</b>  <b>Environmental Protection Agency</b>          Washington, DC 20460       </div>		<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"><input type="checkbox"/> Registration</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"><input type="checkbox"/> Amendment</div> <div style="border: 1px solid black; padding: 2px;"><input checked="" type="checkbox"/> Other</div>	OPP Identifier Number
<b>Application for Pesticide – Section I</b>			
1. Company/Product Number 70506-227		2. EPA Product Manager Gebken	
4. Company/Product (Name) United Phosphorus, Inc/Bifenture 10WSB/DF insecticide/Miticide		3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted	
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg No.  Product Name	
<input checked="" type="checkbox"/> Check if this is a new address			
<b>Section - II</b>			
<input type="checkbox"/> Amendment – Explain below		<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated Feb. 16, 2010	
<input type="checkbox"/> Resubmission in response to Agency letter dated _____		<input type="checkbox"/> "Me Too" Application	
<input type="checkbox"/> Notification – Explain below		<input type="checkbox"/> Other – Explain below	
<b>Explanation:</b> Use additional page(s) if necessary. (For Section I and Section II.)  Submission of final printed labeling.			
<b>Section III</b>			
1. Material This Product Will be Packaged in:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>*Certification must be submitted</b>	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Unit Packaging wgt.	Water Soluble Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Package wgt	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 lb or 2.5 lb DF	5. Location of label directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Label accompanying product
6. Manner in Which Label is Affixed to Product		<input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____	
<b>Section IV</b>			
1. Contact Person (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Rebecca A. Clemmer		Title Regulatory Manager	Telephone No. (Include Area Code) 610-491-2828
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law			6. Date Application Received   <b>(Stamped)</b>
2. Signature 		3. Title Regulatory Manager	
4. Typed Name Rebecca A. Clemmer		5. Date Feb. 22, 2010	



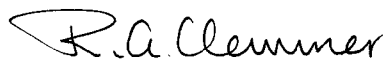
# Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
70506-227	Feb. 22, 2010	070506-00227.20100216.Bifenture WSB-DF MASTER label.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.



Signature

February 22, 2010

Date

Rebecca A. Clemmer

Name (typed)

Regulatory Manager

Title





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

Feb. 22, 2010

Mr. Richard Gebken (PM 13)  
Document Processing Desk (FPL)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Submission of Final Printed Labeling  
Bifenture 10 WSB/DF Insecticide/Miticide (EPA Reg. No. 70506-227)

Dear Mr. Gebken:

United Phosphorus, Inc. (UPI) is submitting final printed labeling as required by your letter dated Feb. 16, 2010. All required changes have been made to this master label.

Enclosed with this letter, please find the following items:

1. Application for Pesticide Registration (EPA Form 8570-1).
2. CD containing an electronic version of the label
3. Three hard copies of the master label
4. Label Integrity form

Please contact me if you have any questions about this information.

Very truly yours,

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)





U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

EPA Reg. Number:  
70506-227

Date of Issuance:  
FEB 16 2010

Term of Issuance:  
Conditional

Name of Pesticide Product:  
Bifenture® 10DF  
Insecticide/Miticide

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration

(Under FIFRA as amended)

Name and Address of Registrant (include ZIP Code):

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is **conditionally** registered in accordance with FIFRA sec. 3(c)(7)(A), provided that:

1. You will submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. You will make the following label changes before you release the product for shipment:
  - a) Revise the EPA Registration Number to read "EPA Reg. No. 70506-227."
  - b) The acute toxicity profile for this product is as follows:

Acute oral toxicity	III
Acute dermal toxicity	III
Acute inhalation toxicity	IV
Primary eye irritation	III
Primary skin irritation	IV
Dermal sensitization	Neg.

Based on the toxicity profile above, you may delete the "If Inhaled" first aid statement. Also revise the Precautionary Statement to read as follows:

Signature of Approving Official:

*Richard Gebken*  
Richard Gebken Interim Product Manager 13  
Insecticide Branch/Registration Division (7505P)

Date:

*February 16, 2010*



“Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse”.

- c) The signal word is determined by the most severe toxicity category, according to the above toxicity profile replace the signal word “Warning” with “Caution”.
  - d) Move the Spray Drift Requirements, Wind Direction and Speed, Temperature Inversions, and Droplet Size sections to the end of the Buffer Zone for Non-ULV Aerial Application section and before the Additional Requirements for Ground Applications section. Also delete “Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area” from the Spray Drift Requirements section.
  - e) Make the following revisions to the *Brassicas* Instructions:
    - a. Replace “Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment” with “Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment”.
    - b. Replace “Preharvest interval: 3 days” with “Preharvest interval: 7 days”.
    - c. Add “Do not make application less than 7 days apart”.
    - d. Add “Do not make more than 5 applications after bloom”.
  - f) Make the following revision to the *Fruiting Vegetables* Directions:
    - a. The dosage for eggplant, pepper, ground cherry, and pepino must be the same as tomatoes. Delete the higher rate 16.0% (0.10 ai/a).
  - g) On page 16 add, in parenthesis “(except sugarbeets)” following the heading *Root Crops*.
  - h) Under *Tomato, Tomatillo* delete, “or 5 gallons per acre by air”.
3. Within one year from the date of this notice submit the results of studies for the 830.6317 (one year storage stability) and 830.6320 (corrosion characteristics) studies. For the storage stability study it is recommended that the observations be made at 0, 3, 6, 9, and 12 months intervals.
4. Please submit three (3) copies of your final printed labeling before releasing the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing amended labeling constitutes



acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact BeWanda Alexander at [www.alexander.bewanda@epa.gov](mailto:www.alexander.bewanda@epa.gov) or (703) 305-7460.



**RESTRICTED USE PESTICIDE**

Toxic to fish and aquatic organisms. For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

GROUP

3

INSECTICIDE

**BIFENTURE<sup>®</sup> 10DF Insecticide/Miticide**  
(primary name)**BIFENTURE<sup>®</sup> 10WSB Insecticide/Miticide**  
(alternate name)**ACTIVE INGREDIENT:**

Bifenthrin\* (2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate.....

10.0%

**OTHER INGREDIENTS:** ..... 90.0%

**TOTAL** ..... 100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

**FIRST AID****If Swallowed:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**If in Eyes:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

**Note to Physician:** This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For chemical emergency: spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

**United Phosphorus, Inc.****630 Freedom Business Center****King of Prussia, PA 19406**

1-800-438-6071 • www.upi-usa.com

**EPA Reg. No. 70506-227****EPA Est. No.****Net Contents**

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated**

**FEB 16 2010**

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

70506-227



## PRECAUTIONARY STATEMENTS

### Hazards to Humans (and Domestic Animals)

Warning. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing.

#### Personal Protective Equipment:

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

#### Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product through any type of irrigation system.

**Resistance.** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities or universities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect pest may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural adviser for the best alternative method of control for your area.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.



For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls; waterproof gloves; and shoes plus socks.

### GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

*The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Avoid rough handling which may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.*

Bifenture WSB/DF insecticide must be diluted with water before spray application. Do not use nozzle screens (e.g. strainers) greater than 50 mesh size. *Determine the number of water soluble bag(s) to make up necessary spray suspension.*

*Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:*

$$\frac{\text{Rate for Pest (Active/Acre)}}{0.05 \text{ (amt. ai in each bag)}} \times \text{Number of Acres to be Treated} = \text{Number of Bifenture Water Soluble Bags to use for acres to be treated}$$

**Do not break bags.** *When the equation equals less than a whole number of bags, use the next higher whole number of bags.*

Fill the spray tank 1/2 full with water. Add required amount of Bifenture 10 WSB. *Open the outer wrapper of this product and immediately dump required number of water soluble bags into the spray tank. Allow the bag(s) to dissolve completely. Start agitation in the tank. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.*

Mix as needed; do not store diluted material.

#### Rotational Crops

Crops for which bifenthrin tolerances exist may be rotated at any time. All other crops may be rotated 30 days following the final application of bifenthrin.

#### Tank-Mixture

Bifenture 10 WSB/DF Insecticide/Miticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing using a standard jar test or other similar method.

#### Spray Drift Requirements

Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

#### Wind Direction and Speed



Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

#### **Temperature Inversions**

Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

#### **Droplet Size**

Use only medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

#### **Buffer Zones**

##### **Vegetative Buffer Strip**

Construct and maintain a minimum 10-foot wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing bifenthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp. <http://www.in.ces.usda/v/technical/agronom/newconbuf.pdf>.

##### **Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

##### **Buffer Zone for ULV Aerial Application**

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

##### **Buffer Zone for Non-ULV Aerial Application**

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

#### **Additional Requirements for Ground Applications**

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to applications.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

#### **Additional Requirements for Aerial Applications**

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.



## Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

### Artichoke

Pest	Rate oz/A (lb ai/A)	Instructions
Artichoke Plume Moth Cribrate Weevil	16.0 (0.10)	<p>Apply when pest populations reach damaging thresholds and repeat as necessary to maintain control, but not more often than 15-day intervals.</p> <p>Do not apply more than 16 oz product (0.10 lb ai)/A between bud formation and harvest of an individual fruit.</p> <p><b>Ground Application:</b> Apply in a minimum of 75 gallons per acre.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons per acre.</p> <p>Do not apply more than 80 oz product (0.5 lb ai) per acre per season.</p> <p>Preharvest interval: 5 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>

### Brassicas

Broccoli, Chinese Broccoli, (gailon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), Chinese Mustard Cabbage (gai choy)

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 – 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.
Aphids Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leathoppers Loopers Tobacco Budworm Saltmarsh Caterpillar Stink Bugs Thrips Wireworm (adults)	5.3 to 16.0 (0.033 - 0.10)	<p><b>Foliar Use:</b> Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.</p> <p>Thorough coverage is essential to achieve control.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per season, including at-plant applications.</p> <p>Preharvest interval: 3 days.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
Banks Grass Mite	12.8 to 16.0	



Carmine Mite <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	(0.08 - 0.10)	
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## Bushberries

Blueberry (highbush and lowbush), Currant, Elderberry, Gooseberry, Huckleberry

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Blueberry Maggot Fruitworms Leafhoppers Lecanium Scale (crawlers) Obliquebanded Leafroller Plum Curculio Redbanded Leafroller Spanworm Variegated Leafroller	5.3 to 16.0 (0.033 to 0.10)	Apply in at least 2 gallons per acre by air or in at least 10 gallons per acre with ground equipment. Thorough coverage is essential to achieve control.  Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 1 day.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmine Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	



## Caneberries

Including: Blackberries, Bingleberries, Dewberries, Lowberries, Marionberries, Olallieberries, Youngberries, Loganberries, Raspberries

Pest	Rate oz/A (lb ai/A)	Instructions
Black Vine Weevil Leafrollers Orange Tortrix Root Weevils	8.0 to 16.0 (0.05 to 0.1)	Apply by air or ground equipment using sufficient water to obtain full coverage of the canopy. Use a minimum of 10 gallons per acre by air and 50 gallons per acre by ground.  One application may be made pre-bloom and a second application may be made post bloom.
Carmine Mite Raspberry Crown Borer Twospotted Spider Mite	16.0 (0.1)	For Crown Borer: apply 16 oz product (0.1 lb ai) per acre, post-harvest (fall) or pre-bloom (spring), as a drench application directed at the crown of plants in a minimum of 200 gallons water/acre. Greater efficacy is observed at higher water gallonages (up to 400 gallons/A) or in an application prior to a significant rainfall event. Do not make both pre-bloom foliar and pre-bloom drench applications.  Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 3 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Canola, Crambe, Rapeseed

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Diamondback Moth Flea Beetle Flea Hopper Grasshopper Loopers Other Lepidopterous Larvae Plant Bug Stink Bugs Seedpod Weevil Thrips	5.3 to 6.4 (0.033 - 0.04)	Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.  Thorough coverage is essential to achieve control.  Do not apply more than 12.8 oz product (0.08 lb ai) per acre per season.  Do not make applications less than 14 days apart. Preharvest interval: 35 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



## Citrus

Pest	Rate oz/A (lb ai/A)	Instructions
Blue Green Citrus Root Weevil Brown Leaf Notcher Diaprepes Root Weevil Fuller Rose Beetle Green Citrus Root Weevil Little Leaf Notcher Southern Blue Green Citrus Weevil	40.0 to 80.0 (0.25 to 0.50)	<p>Apply Bifenture 10 WSB/DF by ground equipment to bare soil beneath citrus trees. Bifenture 10 WSB/DF must be uniformly applied from the trunk to the drip line of tree; apply in a minimum of 40 gallons of dilute spray per acre. Greater spray volume will insure greater uniformity of coverage. A pre- and post-application irrigation may aid in the uniformity of coverage as well.</p> <p>Bifenture 10 WSB/DF protects citrus tree roots from Diaprepes and other citrus root weevils feeding by forming a barrier which provides contact activity on newly hatched larvae (neonates). As eggs hatch in new foliage, neonates fall to the soil surface BELOW the tree and come in contact with Bifenture 10 WSB/DF as they attempt to burrow into the root zone.</p> <p>Minimize disturbance of the soil beneath trees.</p> <p>Timing of Bifenture 10 WSB/DF applications is critical. Current information suggests that peak emergence of adult Diaprepes Weevil varies by citrus growing region and these emergence peaks can be dramatically affected by environmental factors, such as soil moisture. Typically, two peaks are observed for Diaprepes, first in spring then late summer or early fall. Southern Blue-Green and Blue-Green Citrus Weevils and Fuller Rose Beetle typically exhibit a single emergence peak in the spring. Brown and Little Leaf Notchers typically exhibit three emergence peaks, spring, summer and fall. Since emergence varies seasonally and by location, timing of Bifenture 10 WSB/DF application can be accurately forecast by observing adults. Adults are most active early morning and late afternoon; numbers can be estimated by trapping throughout spring and summer (emergence periods). Egg laying will occur for 8 to 10 weeks following adult emergence from the soil; larval invasion of the soil will begin 2-3 weeks following adult emergence. It is critical to have the Bifenture 10 WSB/DF soil barrier in place prior to drop of the neonates.</p> <p>Bifenture 10 WSB/DF is one of several effective tools in an integrated pest management program for Citrus Root Weevils. Apply in conjunction with good cultural practices, biological control of larvae and foliar control of adults. Consult local university extension personnel for current information to protect citrus trees from Citrus Root Weevils and other pests.</p> <p><b>Additional Instructions:</b></p> <p>Apply to individual citrus resets, when not in solid planted rows, using handgun or shielded sprayer.</p> <p>Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.</p> <p>If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, use 80 oz product (0.50 lb ai) to obtain the longest residual management of Diaprepes root weevil.</p> <p>If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 40 oz product (0.25 lb ai) can be applied early season and 0.25 pound active can be applied later in the season.</p> <p>Do not apply through irrigation systems.</p> <p>Do not allow any application of Bifenture 10 WSB/DF to contact fruit or foliage.</p> <p>Do not apply more than a total of 80 oz product (0.5 lb ai) per acre per year.</p> <p>Preharvest interval: 1 day.</p> <p>Apply in a minimum of 40 gallons of finished spray per acre.</p> <p>Ground application only. Do not apply by air.</p>
Asian Cockroach Fire Ants	16.0 to 40.0 (0.1 to 0.25)	



## Cotton

Pest	Rate oz/A (lb ai/A)	Instructions
European Corn Borer Soybean (Banded) Thrips Tobacco Thrips	3.2 to 16.0 (0.02 to 0.10)	This product may be applied in water. Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by air.
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms Fall Armyworm Plant Bugs Saltmarsh Caterpillar Southern Garden Leafhopper Stink Bugs Tobacco Budworm	6.4 to 16.0 (0.04 to 0.10)	To control Boll Weevil: apply at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels. To control Mites and Aphids: apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days. Do not graze livestock in treated areas or cut treated crops for feed. Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Beet Armyworm Carmine Spider Mite <i>Lygus</i> spp. Pink Bollworm Twospotted Spider Mite Whiteflies	9.6 to 16.0 (0.06 to 0.10)	

## Cucurbits

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); Citron melon; Cucumber; Gherkin; Gourd, edible (includes hyotan, cucuzza); (*Luffa* spp.) (includes hechima, Chinese okra); (*Momordica* spp.) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (includes butternut squash, calabaza, hubbard squash (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.)

Pest	Rate oz/A (lb ai/A)	Instructions
Wireworms Maggots Grubs	8.0 to 16.0 (0.05 – 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant.
Aphids Armyworms	8.0 to 16.0 (0.05 – 0.10)	<b>Foliar Use:</b> Apply in a minimum of 5 gallons per acre by air or in a minimum of 20 gallons per acre with ground equipment.



Cabbage Looper Corn Earworm Cucumber Beetles Cutworms Grasshopper Leafhoppers Plant Bug Pickleworm Melonworm Rindworm Squash Bugs Squash Vine Borer Stink Bugs Tobacco Budworm		Thorough coverage is essential to achieve control. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Do not make more than two applications after bloom. Do not make applications less than 7 days apart. Preharvest interval: 3 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmin Mite <i>Lygus</i> Spp. Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)	

## Fruiting Vegetables

Eggplant, Pepper (Bell & Non-Bell), Groundcherry, Pepino

Pest	Rate oz/A (lb ai/A)	Directions
Armyworms Cabbage Looper Colorado Potato Beetle Corn Earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetle Leafminers Loopers Pepper weevil Plant Bug Stink Bug Thrips Tomato Pinworm Tomato Hornworm Vegetable Leafminer Whiteflies	5.3 to 16.0 (0.033 to 0.10)	Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1-2 quarts of emulsified oil may be substituted for 1-2 quarts of water in the finished spray. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than <u>32 oz product</u> (0.2 lb ai) ( <del>32.0 oz product</del> ) per acre per season. Do not apply within 7 days of harvest. <u>Preharvest interval: 7 days.</u>  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Broad Mite Carmin Mite	12.8 to 16.0 (0.08 to 0.10)	



<i>Lygus</i> Spp. Pacific Spider Mite Two Spotted Spider Mite		
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**Fruiting Vegetables** *(continued)*

## Tomato, Tomatillo

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 12.8 (0.05 to 0.08)	Apply in-furrow with the seed or transplant.
Aphids Armyworms Including: Beet Armyworm, Fall Armyworm, Southern Yellowstriped Armyworm Bean Leaf Beetle Cabbageworm Carmin Mite Cloverworm Corn earworm Corn Rootworm Cucumber Beetles Cutworms Diamondback Moth European Corn Borer Flea Beetles Flea Hopper Grasshopper Japanese Beetle (Adult) Leafhoppers Loopers <i>Lygus</i> Spp. Melonworm Pea Weevil Pea Leaf Weevil Pickleworm Plant Bug Rindworm Salt Marsh Caterpillar Sap Beetle Seedpod Weevil Squash Bugs Stink bug Spp. Tobacco Budworm Tarnished Plant Bug Thrips Tomato Hornworms Two Spotted Spider Mite Whiteflies	5.3 to 12.8 (0.033 to 0.08)	Apply as necessary for insect control using a minimum of 15 gallons per acre with ground equipment or 5 gallons per acre by air. Thorough coverage is essential to achieve control. Do not make applications less than 10 days apart. A maximum of 4 applications may be applied per season. Preharvest interval: 1 day.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



## Grapes

Pest	Rate oz/A (lb ai/A)	Instructions
Cutworms Eastern Grape Leafhopper Grape Berry Moth Japanese Beetles Adults Variegated Leafhopper Western Grape Leafhopper	8.0 to 16.0 (0.05 - 0.10)	Apply in a minimum of 10 gallons by air or in a minimum of 25 gallons with ground equipment. Thorough coverage is essential to achieve control. When pest pressure is moderate to severe, use higher rate. Do not apply more than 16 oz product (0.10 lb ai) per acre per season. Preharvest interval: 30 days.
Black Vine Weevil Glassywinged Sharpshooter Twospotted Spider Mite	16.0 (0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Hops

Not for this use in California

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.1)	Do not apply more than 16 oz product (0.1 lb ai) per acre per application. Do not apply more than 48 oz product (0.3 lb ai) per acre per season. A spray interval of 21 days between applications must be maintained.
Root Weevils	8.0 to 16.0 (0.05 to 0.1)	Preharvest interval: 14 days.
Twospotted Spider Mite	16.0 (0.10)	<b>Ground Application:</b> For best results, full coverage is essential. For early season applications use 100-150 gallons per acre. For late season applications use 200-250 gallons per acre. For Root Weevil control, make a directed spray to the base of the plant. Spray up the bine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant. <b>Air Application (for late season control of Twospotted Spider Mites):</b> Apply a minimum of 16 oz product (0.1 lb ai) per application in a minimum of 10 gallons per acre. <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Leafy Petiole Vegetables

Celery, Cardoon, Chinese celery, Celtuce, Florence fennel, Rhubarb, Swiss chard

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids	5.3 to 16.0	Apply in at least 2 gallons per acre by air or at least 10 gallons per



Armyworms Crickets Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Ground Beetles Imported Cabbageworm Leafhoppers Loopers Saltmarsh Caterpillar Stink Bugs Thrips Tobacco Budworm Whiteflies Wireworm (adults)	(0.033 to 0.10)	acre with ground equipment. Thorough coverage is essential to achieve control. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Do not make applications less than 7 days apart. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Banks Grass Mite Carmin Mite <i>Lygus</i> spp. Pacific Spider Mite Twospotted Spider Mite	12.8 to 16.0 (0.08 to 0.10)	

## Lettuce, Head

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Corn Earworm Cucumber Beetles Cutworms Diamondback Moth Flea Beetles Imported Cabbageworm Leafhoppers Loopers Salt Marsh Caterpillar Stink Bug Spp. Tobacco Budworm	5.3 to 16.0 (0.033 - 0.10)	Apply as necessary for insect control using a minimum of 20 gallons per acre with ground equipment and 5 gallons per acre by air. Thorough coverage is essential to achieve control. Do not make applications less than 7 days apart. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 7 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Carmin Mite <i>Lygus</i> Spp . Two Spotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 - 0.10)	



## Mayhaw

Pest	Rate oz/A (lb ai/A)	Instructions
Plum Curculio	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 28 gallons per acre. Do not apply more than once every 7 days. Do not apply more than 32 oz product (0.2 lb ai) per acre per season. Preharvest interval: 30 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Peanut

Pest	Rate oz/A (lb ai/A)	Instructions
Beet Armyworm Corn Earworm Cutworm spp. Fall Armyworm Grasshoppers Green Cloverworm Leafhoppers Lesser Cornstalk Borer Loopers Redneck Peanut Worm Southern Armyworm Southern Corn Rootworm Stink Bugs Threecornered Alfalfa Hopper Velvetbean Caterpillar Yellowstriped Armyworm	5.3 to 16.0 (0.033 to 0.1)	Make foliar applications in at least 10 gallons per acre at the rate of 16.0 oz product (0.1 lb ai) per acre at a minimum of 14 day intervals. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 14 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Aphids Spider Mites Thrips Whiteflies	5.12 to 16.0 (0.08 to 0.10)	

## Pears

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Codling Moth Cutworms Green Fruitworm	6.4 to 32.0 (0.04 to 0.2)	<b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage. <b>Air Application:</b> Apply in a minimum of 10 gallons per acre by air. Do not apply more than 80 oz product (0.5 pound ai) per acre per



Leafhoppers Leafminers Leafrollers <i>Lygus</i> spp. Plant Bugs Plum Curculio San Jose Scale (Crawlers) Stink Bugs Tarnished Plant Bugs		season with no more than 0.45 pound ai per acre applied after petal fall. Apply as needed to maintain control using a minimum of 30-day spray interval. Preharvest interval: 14 days. Do not graze livestock in treated orchards or cut treated cover crops for feed.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Yellow Spider Mite	9.6 to 32.0 (0.06 to 0.2)	
European Red Mite Twospotted Spider Mite	12.8 to 32.0 (0.08 to 0.2)	

## Root Crops

Crops	Pest	Rate oz/A (lb ai/A)	Instructions
Burdock, edible Carrot Celeriac Chervil, turnip rooted Chicory Ginseng Horseradish Parsley, turnip rooted Parsnip Radish Radish, oriental Rutabaga Salsify Salsify, black Salsify, Spanish Skirret Turnip	Aphids Beet Armyworm Celery Leaf-tier Corn Earworm Cross-striped Cabbageworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Fire Ants Green Cloverworm Hornworms Imported Cabbageworm Loopers Southern Armyworm Tobacco Budworm Velvetbean Caterpillar Yellowstriped Armyworm Spider Mites Whiteflies	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 21 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Garden Beet	Aphids Fire Ants Flea Beetles Lepidopterous Larvae Spider Mites Whitefly	12.8 to 16.0 (0.08 to 0.10)	Make foliar applications in at least 25 gallons per acre. Apply no more than once every 7 days. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. Preharvest interval: 1 day.



## Soybean

Pest	Rate oz/A (lb ai/A)	Instructions
Soybean Aphid	5.3 to 16.0 (0.033 to 0.10)	Make foliar applications in at least 10 gallons per acre at the rate of 16 oz product (0.1 lb ai) per acre at a minimum of 30 day intervals.
Spider Mites	12.8 to 16.0 (0.08 to 0.10)	Do not apply more than 48 oz product (0.3 lb ai) per acre per season. Preharvest interval: 18 days.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>

## Spinach

Pest	Rate oz/A (lb ai/A)	Instructions
Armyworms Colorado Potato Beetle Corn earworm Cucumber Beetles Cutworms European Corn Borer Flea Beetles Leafminers Loopers Pepper Weevil Thrips Tomato Pinworm Tomato Hornworm	5.3 to 16.0 (0.033 to 0.10)	For control of fire ants apply Bifenture 10 WSB/DF to the soil (at planting) or as a foliar treatment by ground or air at rates of up to 16 oz product (0.1 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications. Preharvest interval: 40 days. Apply in 5-50 gallons per acre by air or 10-50 gallons finished spray per acre by ground. Do not make applications less than 7 days apart. Do not apply more than 64 oz product (0.4 lb ai) per acre per season. For control of Whiteflies apply foliar treatments of Bifenture 10 WSB/DF by ground or air at rates up to 16 oz product (0.1 lb ai) per acre at minimum 7-day intervals up to a maximum of 4 applications.
Broad Mite Banks Grass Mite Carmin Mite Fire Ants <i>Lygus</i> Spp. Pacific Spider Mite Twospotted Spider Mite Whiteflies	12.8 to 16.0 (0.08 to 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



## Strawberries

Pest	Rate oz/A (lb ai/A)	Instructions
Aphids Armyworms Flea beetles <i>Heliothis</i> spp. Leafrollers <i>Lygus</i> spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds. Repeat as necessary at 7-14 day intervals.  Do not apply more than 80 oz product (0.5 lb ai) per acre per season. Preharvest interval: 0 days. <b>Ground Application:</b> Apply in a minimum of 50 gallons per acre. <b>Air Application (prohibited in Florida):</b> Apply in a minimum of 5 gallons per acre.  <i>1 bag = 0.05 lb ai = 8 oz formulated product</i>
Black Vine Weevil Strawberry Root Weevil	8.0 to 32.0 (0.05 to 0.2)	
Spider Mites	16.0 to 32.0 (0.1 to 0.2)	

**CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS:** Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Bifenture 10WSB/DF greater than 0.1 lb ai/acre, harvesters must wear gloves for five (5) days following application.

## Succulent Peas and Beans

Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea; Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean; Jackbean; Soybean (immature seed); Sword bean

Pest	Rate oz/A (lb ai/A)	Instructions
Grubs Maggots Wireworms	8.0 to 16.0 (0.05 - 0.10)	<b>Planting Time Use:</b> For Wireworms, maggots or grubs, apply in-furrow with the seed or transplant. <b>Foliar Use:</b> Apply in a minimum of 2 gallons per acre by air or in a minimum of 10 gallons per acre with ground equipment.
Aster Leafhopper Flea Beetle Grasshoppers Leafhoppers	4.0 to 16.0 (0.025 - 0.10)	Thorough coverage is essential to achieve control. Do not apply more than 32 oz product (0.2 lb ai) per acre per season including at plant applications. Preharvest interval: 3 days.
Adult Sap Beetle Alfalfa Caterpillar Aphids Bean Leaf Beetle Beet Armyworm Cloverworm	5.3 to 16.0 (0.033 - 0.10)	<i>1 bag = 0.05 lb ai = 8 oz formulated product</i>



Corn Earworm	
Corn Rootworm Adult	
Cucumber Beetles	
Cutworms	
European Corn Borer	
Fall Armyworm	
Japanese beetle	
Loopers	
Pea Leaf Weevil	
Pea Weevil	
Plant Bug	
Southern Armyworm	
Stink Bugs	
Tarnished Plant Bug	
Thrips	
Yellowstriped Armyworm	
Webworms	
Western Bean Cutworm	
Banks Grass Mite	12.8 to 16.0
Carmine Mite	(0.08 - 0.10)
<i>Lygus</i> Spp	
Twospotted Spider Mite	
Whiteflies	



## Tree Nut Crops

Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black and English)

Pest	Rate oz/A (lb ai/A)	Instructions
Black Pecan Aphid Codling Moth Filbert Worm Hickory Shuckworm Leaffooted Bugs Navel Orangeworm Oblique Banded Leafroller Peach Twig Borer Pecan Leaf Casebearer Pecan Nut Casebearer Pecan Phylloxera Plant Bugs Stink Bugs Walnut Aphid Yellow Pecan Aphid	8.0 to 32.0 (0.05 to 0.20)	<p><b>Ground Application:</b> Apply as a dilute (minimum of 200 gallons per acre) or concentrate (minimum of 50 gallons per acre) spray in sufficient water to provide thorough coverage.</p> <p><b>Air Application:</b> Apply in a minimum of 10 gallons of finished spray per acre.</p> <p>Minimum Spray Intervals: Apply Bifenture 10WSB/DF as needed to maintain control, but do not apply at intervals sooner than 15 days.</p> <p>Observe a 21 day PHI for pecans and a 7-day PHI for all other registered tree nut crops.</p> <p>Do not apply more than 32 oz product (0.2 lb ai) per acre per application; do not apply more than 80 oz product (0.50 lb ai) per acre per season.</p> <p>Do not graze livestock in treated orchards or cut treated cover crops for feed.</p> <p><i>1 bag = 0.05 lb ai = 8 oz formulated product</i></p>
European Red Mite Pecan Weevil Spider Mites	12.8 to 32.0 (0.08 to 0.20)	
Fire Ants Walnut Husk Fly	16.0 to 32.0 (0.1 to 0.2)	



## STORAGE AND DISPOSAL

**Pesticide Storage:** Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not allow inner bags to become wet during storage. Do not handle inner bag with wet hands or wet gloves. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### Container Disposal:

[non-WSB packaging] Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

*[WSB packaging] Nonrefillable container. Do not reuse or refill this container. When all water soluble bags are used, the outer package should be clean and may be disposed of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If the outer container contacts formulated product in any way, it must be triple rinsed with clean water. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and close tightly. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.*

## Dealers Must Sell in Original Packages Only.

### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.**

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT**



**LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 7/09



DP BARCODE No.: D368247 File Symbol No.: 70506-EET PRODUCT NAME: BIFENTURE  
10WSB/10DF Insecticide/Miticide

DATE OUT: 08 / JAN / 2010

**FEE**

SUBJECT: FEE.PRODUCT CHEMISTRY REVIEW OF MP ☐ EP ☒  
DP BARCODE No.: D368247 File Symbol No.: 70506-EET  
PRODUCT NAME: BIFENTURE 10WSB/10DF Insecticide/Miticide  
COMPANY: United Phosphorous Incorporation  
FOOD USE ☒ NON-FOOD USE ☐ INTEGRATED FORMULATION ☐  
PCC: 128825; Decision No. 417630 ACTION CODE: R310

FROM: Shyam Mathur,  
Product Chemistry Team Leader  
Technical Review Branch/RD (7505P)

*SPB*  
*01/08/10*  
*mm*

TO: BeWanda Alexander / Richard Gebken, PM 13  
Insecticide Branch / RD (7505P)

### INTRODUCTION:

The registrant has submitted an application for the registration of a new end use product "BIFENTURE 10WSB/10DF Insecticide/Miticide". The registrant has provided product chemistry data corresponding to guideline 830 series group A & group B with MRID Nos. 478132-01, 478132-02 and 478132-03. The registrant has submitted CSF's for basic & alternate formulations both dated July 20, 2009. TRB has been asked to determine the acceptability of the product chemistry data submitted for the proposed end-use product and determine the acceptability of the proposed basic & alternate CSF's.

### SUMMARY OF FINDINGS

1. The proposed end-use product contains Bifenthrin technical [Reg. No. 70506-18, 99.4%] as the active ingredient with label claim nominal concentration of 10.0%.
2. The proposed CSF's for basic & alternate formulations (both dated 07-20-09) are filled out correctly and completely. The nominal concentration of the active ingredient concurs with the product label claim nominal concentration. The CSF's are in compliance with PR Notice 91-2. The alternate CSF is in compliance with 40CFR§152.43. All the inert ingredients present in the formulation have been approved by the Agency for the proposed uses (IIAB, 08-18-09). The standard certified limits have been proposed for the active ingredient and for the inert ingredients which are in compliance with the standard certified limit table set-forth in 40CFR§158.350(b)(2). The data submitted corresponding to guidelines 830.1550 (product identity & composition) satisfy the product chemistry data requirements of 40CFR §158.320 [MRID No. 478132-01].
3. The data submitted corresponding to guidelines 830.1600 (description of material used to produce the product), 830.1650 (description of formulation process), 830.1670 (discussion on the formation of impurity) and 830.1750 (certified limits) satisfy the data requirements of 40CFR §158.325, §158.335, §158.340 and 158.350 respectively [MRID No. 478132-01].



4. The data submitted corresponding to guideline 830.1800 (enforcement analytical method) satisfy the data requirements of 40CFR§158.355. The active ingredient content is determined by HPLC/UV method on a reversed phase column using acetonitrile and water (90:10 v/v) as mobile phase. The method employs external standard calibration techniques utilizing peak area measurements for quantitative determinations. A reversed phase Nucleosil C18 column, 250 mm x 4.6 mm (id), 5 µm film thicknesses is employed for the separation with UV detector operating at 254 nm. The analytical method was validated by analyzing the test substance and the reference standard. The validation covered specificity, linearity, LOD, LOQ, precision (% RSD) and accuracy [MRID No. 478132-03].

5. The product chemistry data submitted (self certification) corresponding to the guidelines 830 series group B (physical-chemical properties) satisfy the data requirements of 40CFR §158.310(e), except for the one year storage stability (830.6317) and corrosion characteristics (830.6320) studies for the proposed end use product [MRID Nos. 478132-02].

### **CONCLUSIONS:**

The TRB has reviewed the product chemistry data submitted for the proposed end-use product and has concluded that:

1. The proposed CSF's for basic & alternate formulations (both dated 07-20-09) are acceptable.
2. The data submitted corresponding to guidelines 830.1600 (description of materials used to produce the product), 830.1650 (description of formulation process), and 830.1670 (discussion on the formation of impurity), 830.1750 (certified limits) and 830.1800 (enforcement analytical method) are acceptable.
3. The product chemistry data submitted corresponding to guidelines 830.6302 (color), 830.6303 (physical state), 830.6304 (odor), 830.6314 (oxidation/reduction), 830.6315 (flammability), 830.6316 (explosibility), 830.7000 (pH) and 830.7300 (density) are acceptable. No data was submitted for the guidelines 830.6317 (1 year storage stability), 830.6320 (corrosion characteristics), the registrant has stated that one year studies are in progress.
4. The registrant must generate study corresponding to guideline 830.6317 (1 year storage stability), 830.6320 (corrosion characteristics). It is advised that the observation be made at 0, 3, 6, 9, and 12 months of intervals. The results must be submitted to the Agency for evaluation.



Product Chemistry Data (Series 830 group A & group B)

Subgroup A	Data Required Fulfilled	MRID No.
830.1550. Chemical Identity (basic & CSF's)	A	07-20-09
830.1600. Beginning Materials	A	478132-01
830.1650. Formulation Process	A	478132-01
830.1670. Discussion of Impurities	A	478132-01
830.1700. Preliminary Analysis	NA	
830.1750. Certified Limits	A	478132-01
830.1800. Enforcement Analytical Method	A	478132-03

Subgroup B	Data Required Fulfilled	Value or Qualitative Description	MRID No.
830.6302. Color	A	Off white	478132-02
830.6303. Physical State	A	Solid (powder)	" " "
830.6304. Odor	A	Odorless	" " "
830.6314. Oxidation/Reduction Action	A	None	" " "
830.6315. Flammability	NA		" " "
830.6316. Explodability	NA		
830.6317. Storage stability	I	1 year in progress	" " "
830.6319. Miscibility	NA		
830.6320. Corrosion Characteristics	I	1 year in progress	" " "
830.6321. Dielectric Breakdown Voltage	NA		
830.7000. pH	A	7.67 @ 20°C	478132-02
830.7100. Viscosity	NA		
830.7000. Density (Tap)	A	0.4226 g/ml @ 23°C	" " "
830.7520. Particle size, fibre length, & diameter distribution	NA		

Explanations: A = The Requirements Were Fulfilled; N = The Requirements Were Not Fulfilled; NA = Not Applicable; G = Data Gap; U = Requires Upgrading; I = Incomplete or In Progress; W = Waived.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

06/JAN/2010

MEMORANDUM

Subject: Name of Pesticide Product: BIFENTURE® 10WSB/10DF Insecticide/Miticide  
EPA File Symbol: 70506-EET  
DP Barcode: D368243  
Decision No.: 417630  
Action Code: R310  
PC Code: 128825 Bifenthrin

From: Rick J. Whiting, Biologist  
Technical Review Branch (TRB)  
Registration Division (7505P)

*R. Whiting* *M. Haskin*

To: BeWanda Alexander / Richard Gebken, RM Team 13  
Insecticide Branch  
Registration Division (7505P)

Applicant: United Phosphorous, Inc.  
630 Freedom Business Center  
King of Prussia, PA 19406

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt</u>
128825 Bifenthrin (CAS No. 82657-04-3)*	10.0
<u>Inert Ingredient(s):</u>	90.0
Total:	100.0%

\* Cis isomers 97% minimum, trans isomers 3% maximum



**ACTION REQUESTED:** The Risk Manager requests: "Please review the attached toxicity studies submitted to support an application for a new Bifenthrin end-use registration. Product similar to 279-3108."

**BACKGROUND:** United Phosphorous, Inc. has submitted six acute toxicity studies, Basic and Alternate Formulation CSFs dated July 20, 2009 and a proposed label to support the registration of BIFENTURE® 10WSB/10DF Insecticide/Miticide, EPA File Symbol 70506-EET. The acute toxicity studies were conducted at Jai Research Foundation and assigned MRID numbers 478132-04 thru -09.

An Agency contractor, Oak Ridge National Laboratory, conducted the primary review of the studies. TRB performed the secondary review and made changes as necessary.

**COMMENTS AND RECOMMENDATIONS:**

1. The six studies have been reviewed and are classified as acceptable.
2. The acute toxicity profile for BIFENTURE® 10WSB/10DF Insecticide/Miticide, EPA File Symbol 70506-EET, is as follows:

Acute oral toxicity	III	Acceptable	MRID 47813204
Acute dermal toxicity	III	Acceptable	MRID 47813205
Acute inhalation toxicity	IV	Acceptable	MRID 47813206
Primary eye irritation	III	Acceptable	MRID 47813207
Primary skin irritation	IV	Acceptable	MRID 47813208
Dermal sensitization	Negative	Acceptable	MRID 47813209

3. Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

**PRODUCT ID #:** 070506-00227

**PRODUCT NAME:** BIFENTURE® 10WSB/10DF Insecticide/Miticide

**PRECAUTIONARY STATEMENTS**

**SIGNAL WORD:** CAUTION

**Hazards to Humans and Domestic Animals:**

Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. [Wear protective eyewear.]\* Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse. Avoid contact with eyes or clothing.

\* [Protective eyewear may be specified, if appropriate.]



**First Aid:**

If on skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

4. In addition, TRB noted that the proposed label submitted by the registrant has used the signal word WARNING instead of CAUTION and included additional First Aid and Precautionary statements and User Safety Recommendations. TRB finds this additional labelling information acceptable.

5. The Basic and Alternate Formulation CSFs dated July 20, 2009 for the proposed product should also be reviewed and accepted by the TRB Product Chemistry Team



## DATA EVALUATION RECORD

### BIFENTHRIN [BIFEN WSB (WETTABLE POWDER)]

**STUDY TYPE: ACUTE ORAL TOXICITY - RAT [OPPTS 870.1100; OECD 425]  
ACUTE DERMAL TOXICITY - RAT [OPPTS 870.1200; OECD 402]  
ACUTE INHALATION TOXICITY - RAT [OPPTS 870.1300; OECD 403]  
ACUTE EYE IRRITATION - RABBIT [OPPTS 870.2400; OECD 405]  
ACUTE DERMAL IRRITATION - RABBIT [OPPTS 870.2500; OECD 404]  
DERMAL SENSITIZATION - GUINEA PIG [OPPTS 870.2600; OECD 406]  
MRID: 47813204, 47813205, 47813206, 47813207, 47813208, and 47813209**

Prepared for  
Registration Division  
Office of Pesticide Programs  
U.S. Environmental Protection Agency  
One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202

Prepared by  
Toxicology and Hazard Assessment Group  
Environmental Sciences Division  
Oak Ridge National Laboratory  
Oak Ridge, TN 37831  
Task Order No. 1-33

Primary Reviewer:  
Donna L. Fefee, D.V.M.

Signature: Robert H. Ross  
Date: DEC 18 2009

Secondary Reviewers:  
Dana F. Glass, D.V.M.

Signature: Dana F. Glass  
Date: DEC 18 2009

Robert H. Ross, M.S., Group Leader

Signature: Robert H. Ross  
Date: DEC 18 2009

Quality Assurance:  
Dana F. Glass, D.V.M.

Signature: Dana F. Glass  
Date: DEC 18 2009

### Disclaimer

This review may have been altered subsequent to the contractor's signatures above.

Oak Ridge National Laboratory managed and operated by UT-Battelle, LLC., for the U.S. Department of Energy under Contract No. DE-AC05-00OR22725.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Acute Oral Toxicity – Rat; OPPTS 870.1100; OECD 425

**TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

**CITATION:** Shinde, K. (2009) Acute oral toxicity study of Bifen WSB (Wettable Powder) in rats. Study Number 8606. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 13, 2009. MRID 47813204.

**SPONSOR:** United Phosphorus Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In an acute oral toxicity study (MRID 47813204), six fasted, female Wistar rats (age: 10-11 weeks; weight: 170-188 g; source: Animal Breeding Facility, Jai Research Foundation) were given single oral gavage doses Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder] in distilled water at dose levels of 175 mg/kg bw (two animals), 550 mg/kg bw (three animals), or 1750 mg/kg bw (one animal) with a constant dosing volume of 10 mL/kg bw. Doses were selected according to AOT425statpgm. Individual body weights were recorded prior to dosing (day 0) and on days 7 and 14 and at death. Animals were observed for signs of toxicity and mortality at 30 minutes, 1, 2, 3, 4 and 6 hours on the day of dosing and twice a day thereafter for up to 14 days. Gross necropsies were performed on all animals.

The animal dosed at 1750 mg/kg bw was found dead on day 1, and two (of three) animals dosed at 550 mg/kg bw were found dead (on days 1 and 2); all exhibited abdominal breathing and/or nasal irritation beginning 3-5 hours after dosing. The surviving 550 mg/kg animal exhibited abdominal breathing beginning 3 hours after dosing and continuing through day 1, with additional clinical signs of tonic convulsions and nasal irritation seen on day 1 and recovery by day 2. The animals dosed at 175 mg/kg bw appeared normal throughout the study, and all of the surviving animals gained weight during both weeks of the study. Abnormal gross necropsy findings were limited to mild to moderate lung congestion in the animals that died, with no gross abnormalities seen in the surviving animals.

LD<sub>50</sub> Females = 550 mg/kg bw (95% PL Confidence Interval is 92.34 to 2240 mg/kg bw)

**Based on the acute oral LD<sub>50</sub>, Bifen WSB (Wettable Powder) is in EPA Toxicity Category III.**

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute oral study (OPPTS 870.1100; OECD 425) in the rat.

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.



## RESULTS and DISCUSSION:

AOT425statpgm (Version: 1.0) Test Results and Recommendations  
Acute Oral Toxicity (OECD Test Guideline 425) Statistical Program

Test/Substance: Bifen WSB (Wettable Powder)

Test type: Main Test

Limit dose (mg/kg): 5000

Assumed LD50 (mg/kg): Default

Assumed sigma (mg/kg): 0.5

Recommended dose progression: 5000, 1750, 550, 175, 55, 17.5, 5.5, 1.75

DATA:

Test Seq.	Animal ID	Dose (mg/kg)	Short-term Result	Long-term Result
-----------	-----------	--------------	-------------------	------------------

1	1	175	O	O
2	2	550	X	X
3	3	175	O	O
4	4	550	O	O
5	5	1750	X	X
6	6	550	X	X

(X = Died, O = Survived)

Dose Recommendation: The main test is complete.

Stopping criteria met: LR criterion.

### SUMMARY OF LONG-TERM RESULTS:

Dose	O	X	Total
175	2	0	2
550	1	2	3
1750	0	1	1
All Doses	3	3	6

Statistical Estimate based on long term outcomes:

Estimated LD50 = 550 (The one dose with partial response; 95% PL Confidence interval is 92.34 to 2240)



- A. **Mortality:** The animal dosed at 1750 mg/kg bw was found dead on day 1. Two (of three) animals dosed at 550 mg/kg bw were found dead: one each on days 1 and 2.
- B. **Clinical observations:** The animals that died exhibited abdominal breathing and/or nasal irritation beginning 3-5 hours after dosing. The surviving 550 mg/kg animal exhibited abdominal breathing beginning 3 hours after dosing and continuing through day 1, with additional clinical signs of tonic convulsions and nasal irritation seen on day 1 and recovery by day 2. The animals dosed at 175 mg/kg bw appeared normal throughout the study. All of the surviving animals gained weight during both weeks of the study.
- C. **Gross necropsy:** The animals that died had mild to moderate lung congestion. No gross abnormalities were seen in the surviving animals.
- D. **Reviewer's conclusions:** This reviewer agrees with the study author regarding the acute oral LD<sub>50</sub>. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category III.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Acute Dermal Toxicity – Rat; OPPTS 870.1200; OECD 402

**TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

**CITATION:** Shinde, K. (2009) Acute dermal toxicity study of Bifen WSB (Wettable Powder) in rats. Study Number 8607. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 16, 2009. MRID 47813205.

**SPONSOR:** United Phosphorus Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In an acute dermal toxicity study (MRID 47813205), two groups of five male and five female Wistar rats (age: 10-11 weeks; weight: males: 248-279 g; females: 209-242 g; source: Animal Breeding Facility, Jai Research Foundation) were dermally exposed for 24 hours to Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder] moistened with 0.2 mL distilled water at a dose of 2000 mg/kg bw or to a 0.2 mL volume of distilled water (controls). The doses were applied to clipped application sites on the dorsal trunk (comprising at least 10% of the body surface area). The test material was held in contact with the skin using a porous gauze dressing and non-irritating tape throughout the exposure period to prevent access to the patch and to prevent ingestion of the test material. Individual body weights were recorded prior to dosing (day 0) and on days 7 and 14. Animals were observed for signs of toxicity and mortality at 1, 2, 3 and 5 hours post dermal dosing on day 0 and twice a day thereafter for up to 14 days. At the end of the 14 day observation period, all animals were euthanized and subjected to gross pathological examination.

There were no deaths, abnormal clinical signs, or treatment-related gross necropsy findings. One treated female lost weight (-11 g) during the first week of the study, but gained sufficient weight during the second week so that final body weight exceeded initial. One control female lost weight during the second week (-17 g) so that final body was less than initial. The rest of the animals gained weight during both weeks of the study.

LD<sub>50</sub> Males > 2000 mg/kg bw  
LD<sub>50</sub> Females > 2000 mg/kg bw  
LD<sub>50</sub> Combined > 2000 mg/kg bw

**Based on the LD<sub>50</sub> in males and females, classify Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category III.**

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute dermal study (OPPTS 870.1200; OECD 402) in the rat.

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.



## RESULTS and DISCUSSION:

Dose (mg/kg bw)	Mortality/Number tested		
	Males	Females	Combined
0	0/5	0/5	0/10
2000	0/5	0/5	0/10

- A. **Mortality:** There were no deaths.
- B. **Clinical observations:** There were no abnormal clinical signs. One treated female lost weight (-11 g) during the first week of the study but gained sufficient weight during the second week so that final body weight exceeded initial. One control female lost weight during the second week (-17 g) so that final body was less than initial. Week 1 and cumulative body weight gains (as a percentage of initial body weight) of the treated males and females were similar to those of controls.
- C. **Gross necropsy:** There were no treatment-related gross findings. Non-treatment-related findings consisted of minimal distension of the uterus in one treated female and one control female.
- D. **Reviewer's conclusions:** TRB agrees with the study author regarding the acute dermal LD<sub>50</sub>. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category III.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Acute Inhalation Toxicity – Rat; OPPTS 870.1300; OECD 403

**TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

**CITATION:** Shinde, K. (2009) Acute inhalation toxicity study of Bifen WSB (Wettable Powder) in rats. Study Number 8608. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 16, 2009. MRID 47813206.

**SPONSOR:** United Phosphorus Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In an acute inhalation toxicity study (MRID 47813206), a group of five male and five female Wistar rats (age: 10-11 weeks; weight: males: 226-255 g; females: 182-205 g; source: Animal Breeding Facility, Jai Research Foundation) was exposed head/nose-only for 4 hours to Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder] as a dust aerosol with a mean concentration of 5.869 mg/L, mass median aerodynamic diameter (MMAD) of 3.54 µm, and geometric standard deviation (GSD) of 2.95. A separate control group of five males and five females was exposed to air passed through the same inert bed material (iron grit) that was used to generate the test atmosphere. Body weights were recorded prior to exposure on day 0 and again on days 7 and 14 and at death. All animals were observed for signs of toxicity and mortality at hourly intervals during the four hour exposure period and one hour after the exposure period. Subsequently, the animals were observed twice a day for a period of 14 days following exposure. Gross necropsies were performed on all animals.

One treated female died on day 1. All treated animals exhibited nasal discharge and nasal irritation during the fourth hour of exposure and upon removal from the chamber and had tremors and/or abdominal breathing on day 1 with recovery of the surviving animals seen by day 3. One treated male and one treated female lost weight during the first week but gained sufficient weight during the second week so that final body weight exceeded initial. The animals in the control group appeared normal throughout exposure and the remainder of the study and gained weight during both weeks of the study. The only treatment-related abnormal gross necropsy finding was moderate lung congestion in the treated female that died.

LC<sub>50</sub> Males > 5.869 mg/L  
LC<sub>50</sub> Females > 5.869 mg/L  
LC<sub>50</sub> Combined > 5.869 mg/L

**Based on the 4-hour inhalation exposure LC<sub>50</sub>, Bifen WSB (wettable powder) is classified as EPA Toxicity Category IV.**

This study is classified as Acceptable. It does satisfy the guideline requirements for an acute inhalation study (OPPTS 870.1300; OECD 403) in the rat.



**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

**RESULTS and DISCUSSION:**

Nominal conc. (mg/L)	Gravimetric conc. (mg/L)	MMAD (µm)	GSD	Mortality/Number tested		
				Males	Females	Combined
0	0	N/D	N/D	0/5	0/5	0/10
N/D	5.869	3.54	2.95	0/5	1/5	1/10

N/D = "not determined."

**Test atmosphere / Chamber description:** A 75,000 mg quantity of the test material was pre-mixed with sufficient inert bed material (iron grit) to make up a final volume of 5000 mL, and the mixture was loaded into the hopper of a 2-inch fluidized bed aerosol generator (In-Tox Products, USA), which consisted of a feed system (hopper and small diameter tubing with a valve) connected to the upper part of a fluid bed (a long assembly of tubing with attached tube fittings to allow air to flow through the bed, and an overflow spout). Filtered and dried compressed air was introduced through the control unit and aerosolized the test material when wind turbulence at the bottom of the bed separated the test material from the heavier inert bed material, which exited through the overflow and was collected outside while the aerosol dust was directed into the inhalation chamber through a dust inlet tube. The head-nose dynamic inhalation system was constructed of glass and stainless steel and had three components (the inlet, exposure, and outlet chambers) and an internal volume of 63.5 L. The control animals were exposed to compressed air passed through the inert bed material (iron grit).

<b>Gravimetric Conc. (mg/L)</b>	0	5.869
<b>Chamber Volume (L)</b>	63.5	63.5
<b>Total Airflow (L/min)</b>	40	40
<b>Temperature (° C)</b>	21.1-22.9	22.1-23.1
<b>Relative Humidity (%)</b>	54.8-68.1	51.4-56.1
<b>Time to equilibrium</b>	Not applicable	Not determined*

\* Chamber was allowed to equilibrate for thirty minutes

**Test atmosphere concentration:** Samples were collected from the breathing zone of the animals at hourly intervals during exposure, using an open phase sampler and pre-weighed glass microfiber filters. Collections were carried out for 1 minute at 1.77 L/min, and the mass collected was then divided by the total volume of air sampled.

**Particle size determination:** Four samples were withdrawn from the breathing zone of the animals using a vacuum pump and a seven-stage cascade impactor with pre-weighed stainless-steel collection plates and a backup filter. The total mass and percentage of particles in each size range were determined for each time point. Mean cumulative frequencies across the particle size range were determined and used to calculate the MMAD and GSD. This was done using Microsoft Excel.



- A. **Mortality:** One female treated at 5.869 mg/L died on day 1. The rest of the animals survived to scheduled termination.
- B. **Clinical observations:** The animals in the control group appeared normal throughout exposure and the remainder of the study and gained weight during both weeks of the study. All of the treated animals exhibited nasal discharge and nasal irritation during the fourth hour of exposure and upon removal from the chamber followed by tremors and/or abdominal breathing on day 1 with recovery of the surviving animals seen by day 3. One treated male and one treated female lost weight during the first week but gained sufficient weight during the second week so that final body weight exceeded initial.
- C. **Gross necropsy:** The treated female that died had moderate lung congestion. The only other abnormal gross finding was non-treatment-related mild distension of the uterus in a control female.
- D. **Reviewer's conclusions:** In agreement with the study author, the 4-hour inhalation exposure LC<sub>50</sub> for males, females, and the combined sexes is greater than 5.869 mg/L. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category IV.
- E. **Reviewer's note:** The following deficiencies were seen: nominal concentration was not determined, T<sub>99</sub> was not provided, and MMAD and GSD were calculated only once, using mean values from the four measuring time points, rather than four separate times, i.e. at each of the measuring time points.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Primary Eye Irritation – Rabbit; OPPTS 870.2400; OECD 405

**TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

**CITATION:** Shinde, K. (2009) Acute eye irritation study of Bifen WSB (Wettable Powder) in rabbits. Study Number 8610. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 13, 2009. MRID 47813207.

**SPONSOR:** United Phosphorus Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In a primary eye irritation study (MRID 47813207), 100 mg of Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder] was placed in the conjunctival sac of one eye of three female New Zealand White rabbits (age: 31-32 weeks; weight: 2.442-2.600 kg; source: Animal Breeding Facility, Jai Research Foundation) and the upper and lower lids were held shut for approximately one second. The contralateral eye of each animal served as a control and was treated in similar manner with 0.1 mL of normal saline. Eyes were graded for ocular irritation 1, 24, 48, and 72 hours and 7 days after instillation, and both eyes were rinsed with normal saline following fluorescein staining at the 24-hour observation.

Conjunctival redness was present in all treated eyes beginning 1 hour after treatment and continuing through 72 hours, with scores ranging between grades 1 and 3 during that time. Conjunctival chemosis was also present in all three treated eyes beginning 1 hour after treatment and continuing through 48 hours, with scores ranging between grades 1 and 2. All treated eyes were normal by day 7. There were no observations of corneal opacity or iritis, and no conjunctival irritation was seen in the control eyes. There was no uptake of fluorescein dye at 24 hours.

**In this study, the formulation is mildly irritating. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category III for primary eye irritation.**

This study is classified as Acceptable. It does satisfy the guideline requirements for a primary eye irritation study (OPPTS 870.2400; OECD 405) in the rabbit.

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.



## RESULTS AND DISCUSSION:

Observations	Number "positive"/Number treated			
	Hours			
	1	24	48	72
Corneal Opacity	0/3	0/3	0/3	0/3
Iritis	0/3	0/3	0/3	0/3
Conjunctivae:				
Redness*	3/3	3/3	3/3	1/3
Chemosis*	1/3	1/3	0/3	0/3
Discharge*	Not reported	Not reported	Not reported	Not reported

\* Score of 2 or more required to be considered "positive"

- A. Observations:** Conjunctival redness was present in all treated eyes beginning 1 hour after treatment and continuing through 72 hours, with scoring as follows: in one eye, grade 2 at 1, 24, and 48 hours, and grade 1 at 72 hours; in the other two eyes, grade 2 at 1 hour, grade 3 at 24 hours, grade 2 at 48 hours, and grade 1 or 2 at 72 hours. Conjunctival chemosis was present in all three treated eyes beginning 1 hour after treatment and continuing through 48 hours: in two eyes, it was scored as grade 1 at all time points, and in the third eye it was grade 2 at 1 and 24 hours and grade 1 at 48 hours. All treated eyes were normal by day 7. There were no observations of corneal opacity or iritis, and no conjunctival irritation was seen in the control eyes. There was no uptake of fluorescein dye at 24 hours.
- B. Results:** The test facility used the scoring system found in OPPTS 870.2400 and OECD 405 rather than the complete Draize scoring method, and no data were provided concerning ocular discharge. Therefore, the exact mean total scores (MTSs) and the maximum mean total score (MMTS) could not be determined according to Draize for classification according to Kay and Calandra. However, regardless of the presence or absence of any degree of discharge, the MMTS would fall within the 2.6 to 15.0 range, and the scores were not zeros at 72 hours but were zeros (normal appearance) by day 7.
- C. Reviewer's conclusions:** Bifen WSB (Wettable Powder) is mildly irritating to the eye and is classified as EPA Toxicity Category III for eye effects.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Primary Dermal Irritation – Rabbit; OPPTS 870.2500; OECD 404

**TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

**CITATION:** Shinde, K. (2009) Acute dermal irritation study of Bifen WSB (Wettable Powder) in rabbits. Study Number 8609. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 13, 2009. MRID 47813208.

**SPONSOR:** United Phosphorous Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In a primary dermal irritation study (MRID 47813208), three male New Zealand White rabbits (age: 31-32 weeks; weight: 2.074-2.322 kg; source: Animal Breeding Facility, Jai Research Foundation) were dermally exposed for 4 hours to 500 mg of Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder] moistened with 0.5 mL of distilled water. Each dose was applied to a previously clipped application site on one side of the dorsolumbar region and covered with an approximately 6 cm<sup>2</sup> gauze patch ( $\leq$  8 ply) secured at the margins by non-irritating tape. As a control, 0.5 mL of distilled water was applied in similar manner to a previously clipped application site on the contralateral side. Application sites were observed and scored at 1, 24, 48, and 72 hours after patch removal.

Very slight, barely perceptible erythema (score 1) was present on two treated dose sites at 1 hour and on one treated dose site at 24 hours. There were no observations of edema, and all dose sites appeared normal at 48 hours. No abnormal systemic clinical signs were seen.

**Under the conditions of this study, the formulation is a slight irritant, and the Primary Irritation Index (PII) = 0.25. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category IV for primary dermal irritation.**

This study is classified as Acceptable. It does satisfy the guideline requirements for a primary dermal irritation study (OPPTS 870.2500; OECD 404) in the rabbit.

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.



## RESULTS and DISCUSSION:

Animal Number	Sex	Hours			
		1	24	48	72
1	Male	0/0 <sup>a</sup>	1/0	0/0	0/0
2	Male	1/0	0/0	0/0	0/0
3	Male	1/0	0/0	0/0	0/0
Severity of Irritation: Mean Score		0.67/0.00	0.33/0.00	0.00/0.00	0.00/0.00

<sup>a</sup> Erythema/Edema.

A. **Observations:** Very slight, barely perceptible erythema (score1) was present on two treated dose sites at 1 hour and on one treated dose site at 24 hours. There were no observations of edema, and all dose sites appeared normal at 48 hours.

B. **Results:** The Primary Irritation Index (PII) = 0.25.

C. **Reviewer's conclusions:** TRB agrees with the study author that the test material was slightly irritating. Bifen WSB (Wettable Powder) is classified as EPA Toxicity Category IV for primary dermal irritation.



**Primary Reviewer:** Donna L. Fefee, D.V.M., ORNL  
**Secondary Reviewer:** Rick J. Whiting, TRB  
**Risk Manager (EPA):** 13

**Date:** January 6, 2010

**STUDY TYPE:** Dermal Sensitization – Guinea Pig; OPPTS 870.2600; OECD 406

**TEST MATERIAL:** Bifen WSB (Wettable Powder); Bifenthrin: 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; a homogeneous off-white to tan powder; Expiration date: January 6, 2011; stored in accordance with instructions from sponsor (in original container, at room temperature)

**CITATION:** Shinde, K. (2009) Skin sensitization study of Bifen WSB (Wettable Powder) in guinea pigs [guinea pig maximization test]. Study Number 8611. Unpublished study prepared by Jai Research Foundation, Department of Toxicology, Gujarat, India. March 25, 2009. MRID 47813209.

**SPONSOR:** United Phosphorus Limited, Uniphos House, 11<sup>th</sup> Road, Madhu Park, Khar (West), Mumbai - 400 052, India (Corporate Office)

**EXECUTIVE SUMMARY:** In a dermal sensitization study (MRID 47813209), Bifen WSB (Wettable Powder) (10.21% Bifenthrin; Batch No. RD/BFT/10/WSB/0109/1), 10 male and 10 female Hartley guinea pigs (age: not reported; weight: males: 335-408 g, females: 275-350 g; source: Animal Breeding Facility, Jai Research Foundation) were tested using the Guinea Pig Maximization Test. Twenty-four hours prior to each induction, the dose sites were clipped. On day 0, each animal received three pairs of 0.1 mL intradermal injections on the dorsal scapular region, such that the two injections of each pair were done on opposite sides of the midline. The first pair contained Freund's complete adjuvant (FCA), diluted 1:1 with distilled water; the second contained a 5.0% (w/v) formulation of the test material in distilled water; and the third contained a 5.0% (w/v) formulation of the test material in the 1:1 mixture of FCA and distilled water. On day 6, 0.5 mL of 10% sodium lauryl sulfate in Vaseline was applied to dose sites on the left flank to induce local irritation. On day 7, 100 mg of the test material moistened with 0.2 mL of distilled water was applied to the previously clipped left flank using a patch, which was held in place by an occlusive dressing for 48 hours. Reactions were scored (according to Draize) 24 hours after the injections and 24 hours after patch removal.

On day 21, 100 mg of the test material moistened with 0.2 mL of distilled water was applied to the previously clipped right flank using a patch, which was held in place by an occlusive dressing for 24 hours. Reactions were scored (according to Magnusson and Kligman) 24 and 48 hours after patch removal. A group of five males and five females was subjected to induction and challenge in identical manner to the test group, except distilled water was used during the intradermal and topical inductions instead of the test article formulation or moistened test material.

Following the intradermal induction, well-defined erythema and very slight edema were observed on 13 and 7 test animals, respectively, and slight edema and very slight edema were observed on 4 and 16 test animals, respectively. Following the topical induction, well-defined erythema and very slight edema were observed on 16 and 4 test animals, respectively, and slight edema and very slight edema were observed on 7 and 13 test animals, respectively.



Following challenge, there were no visible changes on any of the test animals at either time point. No skin reactions were seen on any of the control animals following intradermal induction, topical induction, or challenge.

There were no abnormal systemic clinical signs, and mean body weights of the treated animals were similar to those of controls.

**Based on the results of this study, Bifen WSB (Wettable Powder) was not a dermal sensitizer.**

This study is classified as Acceptable. It does satisfy the guideline requirements for a dermal sensitization study (OPPTS 870.2600; OECD 406) in the guinea pigs.

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

#### **PROCEDURE:**

- A. Induction:** Twenty-four hours prior to each induction, the dose sites were clipped. On day 0, each animal received three pairs of 0.1 mL intradermal injections on the dorsal scapular region, such that the two injections of each pair were done on opposite sides of the midline. The first pair contained Freund's complete adjuvant (FCA), diluted 1:1 with distilled water; the second contained a 5.0% (w/v) formulation of the test material in distilled water; and the third contained a 5.0% (w/v) formulation of the test material in the 1:1 mixture of FCA and distilled water. On day 6, 0.5 mL of 10% sodium lauryl sulfate in Vaseline was applied to dose sites on the left flank to induce local irritation. On day 7, 100 mg of the test material moistened with 0.2 mL of distilled water was applied to the previously clipped left flank using a patch, which was held in place by an occlusive dressing for 48 hours. Reactions were scored (according to Draize) 24 hours after the injections and 24 hours after patch removal.
- B. Challenge:** On day 21, 100 mg of the test material moistened with 0.2 mL of distilled water was applied to the previously clipped right flank using a patch, which was held in place by an occlusive dressing for 24 hours. Reactions were scored (according to Magnusson and Kligman) 24 and 48 hours after patch removal.
- C. Vehicle controls:** A group of five males and five females was subjected to induction and challenge in identical manner to the test group, except distilled water was used during the intradermal and topical inductions instead of the test article formulation or moistened test material.



## RESULTS AND DISCUSSION:

- A. **Reactions and durations:** Following the intradermal induction, well-defined erythema and very slight edema were observed on 13 and 7 test animals, respectively, and slight edema and very slight edema were observed on 4 and 16 test animals, respectively. Following the topical induction, well-defined erythema and very slight edema were observed on 16 and 4 test animals, respectively, and slight edema and very slight edema were observed on 7 and 13 test animals, respectively. Following challenge, there were no visible changes on any of the test animals at either time point. No skin reactions were seen on any of the control animals following intradermal induction, topical induction, or challenge.

There were no abnormal systemic clinical signs, and mean body weights of the treated animals were similar to those of controls.

- B. **Positive control:** The report included the results of a positive control [alpha-Hexylcinnamaldehyde (HCA), 85%] study (stud number 8361) conducted within six months of the current study; December 22, 2008. The results were appropriate.
- C. **Reviewer's conclusion:** TRB agrees with the study author that the test material was not a dermal sensitizer.
- D. **Reviewer's note:** As a minor deficiency, the ages of the animals were not reported.



## ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D368243
2. **PC CODE:** 128825
3. **CURRENT DATE:** 06/JAN/2010
4. **TEST MATERIAL:** Bifen WSB (Wettable Powder) [Bifenthrin - 10.21% (102.1 g/kg); Batch No. RD/BFT/10/WSB/0109/1; pH: 7.96; a homogeneous off-white to tan powder]

Study/Species/Lab Study # /Date	MRID	Results	Tox. Cat.	Core Grade
Acute oral toxicity / rat Jai Research Foundation 8606 / March 13, 2009	47813204	LD <sub>50</sub> = 550 mg/kg (females)	III	A
Acute dermal toxicity / rat Jai Research Foundation 8607 / March 16, 2009	47813205	LD <sub>50</sub> > 2000 mg/kg (males and females)	III	A
Acute inhalation toxicity / rat Jai Research Foundation 8608 / March 16, 2009	47813206	LC <sub>50</sub> > 5.869 mg/L (males and females)	IV	A
Primary eye irritation / rabbit Jai Research Foundation 8610 / March 13, 2009	47813207	Mildly irritating	III	A
Primary dermal irritation / rabbit Jai Research Foundation 8609 / March 13, 2009	47813208	Slightly irritating	IV	A
Dermal sensitization / guinea pig Jai Research Foundation 8611 / March 25, 2009	47813209	Negative	---	A

**Core Grade Key:** A = Acceptable, S = Supplementary, U = Unacceptable, W = Waived





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## DATA MATRIX

Date: August 18, 2009

EPA Reg No./ File Symbol

Page 1 of 4

Applicant's/Registrant's Name and Address:

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19403

Product: Bifenture 10 WSB/DF Insecticide

Ingredient: Bifenthrin (PC 128825)

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
<b>PRODUCT SPECIFIC DATA</b>					
830.1550	Chemical identity				
830.1600	Starting Materials	UPI-2009-006	UPI	OWN	
830.1650	Description of formulation process	UPI-2009-006	UPI	OWN	
830.1670	Discussion of formation of impurities	UPI-2009-006	UPI	OWN	
830.1750	Certified limits	UPI-2009-006	UPI	OWN	
830.1800	Enforcement analytical method	UPI-2009-006	UPI	OWN	
830.6302	Color	UPI-2009-007	UPI	OWN	
830.6303	Physical state	UPI-2009-006	UPI	OWN	
830.6304	Odor	UPI-2009-006	UPI	OWN	
830.6314	Oxidation/reduction	UPI-2009-006	UPI	OWN	
830.6315	flammability	UPI-2009-006	UPI	OWN	
830.6316	Explodability	UPI-2009-006	UPI	OWN	
830.6317	Storage stability	UPI-2009-006	UPI	OWN	
830.6319	Miscibility	UPI-2009-006	UPI	OWN	
830.6320	Corrosion characteristics	UPI-2009-006	UPI	OWN	
830.6321	Dielectric breakdown voltage	UPI-2009-006	UPI	OWN	
830.7000	pH	UPI-2009-006	UPI	OWN	
830.7100	viscosity	UPI-2009-006	UPI	OWN	
830.7300	Density/relative density/bulk density	UPI-2009-006	UPI	OWN	
870.1100	Acute oral toxicity	JRF 8606	UPI	OWN	
870.1200	Acute dermal toxicity	JRF 8607	UPI	OWN	
870.1300	Acute inhalation toxicity	JRF 8608	UPI	OWN	

Signature

*R.A. Clemmer*

Name and Title

Rebecca A. Clemmer, Regulatory Manager

Date

8/18/09





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**DATA MATRIX**

Date: August 18, 2009	EPA Reg No./ File Symbol 70506-	Page 2 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403 Ingredient: Bifenthrin (PC 128825)	Product: Bifenture 10 WSB/DF Insecticide	

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.2400	Eye irritation	JRF 8610	UPI	OWN	
870.2500	Dermal irritation	JRF 8609	UPI	OWN	
870.2600	Dermal sensitization	JRF 8611	UPI	OWN	

Signature <i>R. A. Clemmer</i>	Name and Title Rebecca A. Clemmer, Regulatory Manager	Date 8/18/09
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## DATA MATRIX

Date: August 18, 2009	EPA Reg No./ File Symbol 70506-	Page 3 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture 10 WSB/DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
91-8	EFFICACY DATA	CITE ALL	Nufarm Americas, FMC, Bayer, Scotts Company, McLaughlin Gormley King, Fuller System, S.C. Johnson, Amvac, Helena, Southern States Cooperative, Nippon Soda Co., The Andersons, Sunniland Corp., Lesco Inc., Makhteshim-Agan, Loveland Products, Howard Fertilizer, Albaugh, BASF Sparks, Control Solutions, Arizona Chemical Group, Arysta Lifescience, Bengal Products, Sapstain Industry Group, Non-Dietary Exposure TF, Univar USA, Residential Exposure JF, Atex Inc., Ag Handlers TF, Osmose Utilities, Ensystex II, Ensystex IV, J. Oliver Products, Axss USA.	Pay	NOTE: United Phosphorus, Inc. is a member of the ARETF, ORETF and SDTF.

Signature <i>R.A. Clemmer</i>	Name and Title Rebecca A. Clemmer, Regulatory Manager	Date 8/18/09
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## DATA MATRIX

Date: August 18, 2009	EPA Reg No./ File Symbol 70506-	Page 4 of 4
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture 10 WSB/DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
GENERIC DATA					
		CITE ALL	Nufarm Americas, FMC, Bayer, Scotts Company, McLaughlin Gormley King, Fuller System, S.C. Johnson, Amvac, Helena, Southern States Cooperative, Nippon Soda Co., The Andersons, Sunniland Corp., Lesco Inc., Makhteshim-Agan, Loveland Products, Howard Fertilizer, Albaugh, BASF Sparks, Control Solutions, Arizona Chemical Group, Arysta Lifescience, Bengal Products, Sapstain Industry Group, Non-Dietary Exposure TF, Univar USA, Residential Exposure JF, Atex Inc., Ag Handlers TF, Osmose Utilities, Ensystex II, Ensystex IV, J. Oliver Products, Axss USA.	PAY	NOTE: United Phosphorus, Inc. is a member of the ARETF, ORETF and SDTF.

Signature

*R.A. Clemmer*

Name and Title

Rebecca A. Clemmer, Regulatory Manager

Date

8/18/09





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

July 24, 2009

Mr. Richard Gebken (PM 13)  
Document Processing Desk (REG)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Application for Registration  
Bifenture 10 WSB Insecticide (EPA Reg. No. 70506- )

Dear Mr. Gebken:

United Phosphorus, Inc. (UPI) is submitting an application for a registration of Bifenture 10 WSB Insecticide, an end-use product which is produced from the registered technical UPI Bifenthrin Technical (EPA Reg. No. 70506-18). The label is substantially similar FMC's Brigade, EPA Reg. No. 279-3108 with the exception that there is label wording for use in water soluble packaging and not.

Enclosed with this letter, please find the following items:

1. Application for Pesticide Registration (EPA Form 8570-1).
2. Confidential Statement of Formula, basic and alternate (EPA Form 8570-4) dated July 20, 2009.
3. Data matrix forms - Agency Use and Public File copies (EPA Form 8570-35).
4. Five (5) copies of the proposed labeling.
5. EPA form 8570-34, Certification with Respect to Offers to Pay, using the cite-all method to satisfy data requirements other than product specific data.
6. Copy of the letter accompanying payment of the PRIA fee.
7. A CD containing an electronic version of the label
8. Certification of label integrity form.
9. Transmittal document.
10. Three (3) copies of reports for product specific data listed in the attached Transmittal Document.

The label is based upon FMC's full label approval on August 28, 2008. It also includes the draft wording that was subsequently required by the Agency, and the changes FMC made to



Notification on October 10, 2008, as well as the information required by PR 2007-4 regarding containers and residue. UPI has revised the words 'should' and 'recommend' where appropriate and has made some other non-substantive changes to avoid copyright issues.

In addition, as allowed by PR Notice 94-8, we are providing wording for product both in water soluble bags and not. We expect to utilize the alternate formula presented in the CSF for the non-WSP product, as the alteration of the one inert makes a less-dusty product suitable to this type of packaging. In the label, the wording that will appear only on the WSP packaging is represented by *italics*, and the wording that will be only on the DF packaging is represented by underline. There is a difference between the two formulas of the amounts of two inerts; no change is made in the identity of the inerts or the amount of active ingredient. The alternate formula provides the slightly less dusty product more appropriate for non water soluble packaging.

This action should fall within the PRIA category R310 "New end-use or manufacturing-use product, requires review of data package within RD" with a PRIA fee of \$4578.

Please let me know if you have any questions about this application or if any additional information is needed.

Very truly yours,

A handwritten signature in black ink, appearing to read "R.A. Clemmer". The signature is fluid and cursive, with a large loop at the beginning.

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)



## TRANSMITTAL DOCUMENT

### Submitter

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

### Regulatory action in support of which this package is submitted

Application for Registration of Bifenture 10 WSB Insecticide

### Transmittal Date

July 24, 2009

### Submitted Studies

MRID	Title	Guideline
47813201	Bifenture 10 WSB/DF Insecticide: Product Identity, Composition and Analysis. United Phosphorus, Inc., Study No. UPI-2009-006. July 23, 2009	Series 830, group A
47813202	Bifenture 10 WSB Insecticide: Self-Certification of Physical/Chemical Properties. United Phosphorus, Inc., Study No. UPI-2009-007, June 12, 2009.	Series 830, group B
47813203	Validation of Analytical Method for Active Ingredient Analysis of Bifen WSB by HPLC. Jai Research Foundation, Study No. 8625. March 9, 2009	830.1800
47813204	Acute Oral Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 1100. March 13, 2009.	870.1100
47813205	Acute Dermal Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8607. March 16, 2009.	870.1200
47813206	Acute Inhalation Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8608. March 16, 2009.	870.1300
47813207	Acute Eye Irritation Study of Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8610. March 13, 2009.	870.2400
47813208	Acute Dermal Irritation Study in Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8609. March 13, 2009.	870.2500
47813209	Skin Sensitization Study of Bifen WSB in Guinea Pigs (Guinea Pig Maximization Test). Jai Research Foundation, Study No. JRF 8611. March 25, 2009.	870.2600





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

July 29, 2009

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

UNITED PHOSPHORUS, INC  
630 FREEDOM BUSINESS CENTER, SUITE 402  
KING OF PRUSSIA, PA 19406-

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your submittal of 27-JUL-09. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.



# Completion of 21-Day Content Screen

PM- 13

EPA Reg. # (File Symbol) 70506-8ET

Decision # D 417630

Data package delivered to  
you on \_\_\_\_\_.  
(date)

Jacket/Mini-jacket will be  
transferred to you today.  
(Pick up from Document Center)

Thank you,

Registration Division's 21-Day Content Team



## Memorandum

Date: 07 / 30 / 09

To: PM 13, Regulatory Manager

From: Information Services Branch, ITRMD

Your receipt of this data submission is not an indication that MRIDs for the enclosed studies have been posted to OPPIN.

**We expect that it will be approximately 5 days from the above date before the study-level data is available in OPPIN.**

If you have any questions about this process, please contact Teresa Downs (305-5363).

This is a: ☒ fully accepted submission  
☐ partially accepted submission  
☐ rejected submission

70506-EET





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

July 24, 2009

Mr. Richard Gebken (PM 13)  
Document Processing Desk (REG)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Application for Registration  
Bifenture 10 WSB Insecticide (EPA Reg. No. 70506- )

Dear Mr. Gebken:

United Phosphorus, Inc. (UPI) is submitting an application for a registration of Bifenture 10 WSB Insecticide, an end-use product which is produced from the registered technical UPI Bifenthrin Technical (EPA Reg. No. 70506-18). The label is substantially similar FMC's Brigade, EPA Reg. No. 279-3108 with the exception that there is label wording for use in water soluble packaging and not.

Enclosed with this letter, please find the following items:

1. Application for Pesticide Registration (EPA Form 8570-1).
2. Confidential Statement of Formula, basic and alternate (EPA Form 8570-4) dated July 20, 2009.
3. Data matrix forms - Agency Use and Public File copies (EPA Form 8570-35).
4. Five (5) copies of the proposed labeling.
5. EPA form 8570-34, Certification with Respect to Offers to Pay, using the cite-all method to satisfy data requirements other than product specific data.
6. Copy of the letter accompanying payment of the PRIA fee.
7. A CD containing an electronic version of the label
8. Certification of label integrity form.
9. Transmittal document.
10. Three (3) copies of reports for product specific data listed in the attached Transmittal Document.

The label is based upon FMC's full label approval on August 28, 2008. It also includes the draft wording that was subsequently required by the Agency, and the changes FMC made to



Notification on October 10, 2008, as well as the information required by PR 2007-4 regarding containers and residue. UPI has revised the words 'should' and 'recommend' where appropriate and has made some other non-substantive changes to avoid copyright issues.

In addition, as allowed by PR Notice 94-8, we are providing wording for product both in water soluble bags and not. We expect to utilize the alternate formula presented in the CSF for the non-WSP product, as the alteration of the one inert makes a less-dusty product suitable to this type of packaging. In the label, the wording that will appear only on the WSP packaging is represented by *italics*, and the wording that will be only on the DF packaging is represented by underline. There is a difference between the two formulas of the amounts of two inerts; no change is made in the identity of the inerts or the amount of active ingredient. The alternate formula provides the slightly less dusty product more appropriate for non water soluble packaging.

This action should fall within the PRIA category R310 "New end-use or manufacturing-use product, requires review of data package within RD" with a PRIA fee of \$4578.

Please let me know if you have any questions about this application or if any additional information is needed.

Very truly yours,

A handwritten signature in black ink, appearing to read "R.A. Clemmer". The signature is fluid and cursive, with a large loop at the beginning.

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)



## TRANSMITTAL DOCUMENT

### Submitter

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

### Regulatory action in support of which this package is submitted

Application for Registration of Bifenture 10 WSB Insecticide

### Transmittal Date

July 24, 2009

### Submitted Studies

MRID	Title	Guideline
47813201	Bifenture 10 WSB/DF Insecticide: Product Identity, Composition and Analysis. United Phosphorus, Inc., Study No. UPI-2009-006. July 23, 2009	Series 830, group A
47813202	Bifenture 10 WSB Insecticide: Self-Certification of Physical/Chemical Properties. United Phosphorus, Inc., Study No. UPI-2009-007, June 12, 2009.	Series 830, group B
47813203	Validation of Analytical Method for Active Ingredient Analysis of Bifen WSB by HPLC. Jai Research Foundation, Study No. 8625. March 9, 2009	830.1800
47813204	Acute Oral Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 1100. March 13, 2009.	870.1100
47813205	Acute Dermal Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8607. March 16, 2009.	870.1200
47813206	Acute Inhalation Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8608. March 16, 2009.	870.1300
47813207	Acute Eye Irritation Study of Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8610. March 13, 2009.	870.2400
47813208	Acute Dermal Irritation Study in Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8609. March 13, 2009.	870.2500
47813209	Skin Sensitization Study of Bifen WSB in Guinea Pigs (Guinea Pig Maximization Test). Jai Research Foundation, Study No. JRF 8611. March 25, 2009.	870.2600



NEW APPLICATIONS

DATE: JUL 27 2009

FILE NUMBER: 70506 - EET

FEP (OPPIN ENTRY) LV 7/28/09  
(Initial & date)

FILE ROOM: \_\_\_\_\_  
(Initial & date)

SIG: \_\_\_\_\_  
(Initial & date)

FILE ROOM: \_\_\_\_\_  
(Initial & date)

✓ ASSIGN TO PM 13 (NO DATA)

       JACKET TO SHELF (DATA)



**21-Day Screen Completed by**  
**Contractor**

**21-Day Expires on** 8-17-09

**Jacket #** 70506-EET

**MRID#** 478132

**Content Screen: Recommended to**  
**Pass/Fail**

**86-5 Review: Passed/Failed/NA**

**Transfer This Jacket to:**

LINDA ARRINGTON



# PRIA 2 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

3/23/09

21 Day Screen Start Date: 7-27-09

Experts In-Processing Signature: MF Harrington Date 7-29-09 Fee Paid: Yes ☒

Division management contacted on issues No ☐ Yes ☐ Date \_\_\_\_\_

EPA Reg. Number: <u>70506 - EET</u>		EPA Receipt Date: <u>7-27-09</u>				
Items for Review				Yes	No	N/A*
1	<b>Application Form</b> (EPA Form 8570-1)(link to form) signed & complete including package type			X		
2	<b>Confidential Statement of Formula</b> all boxes completed, form signed, and dated (EPA Form 8570-4) (Link to form)			X		
	a) All inerts (link to <a href="http://www.epa.gov/opprd001/inerts/">http://www.epa.gov/opprd001/inerts/</a> ), including fragrances, approved for the proposed uses (see Footnote A)	yes	no			
			X			
3	<b>Certification with Respect to Citation of Data</b> (EPA Form 8570-34) (Link to form) completed and signed (N/A if 100% repack)			X		
	Certificate and data matrix consistent			X		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes	no			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	<b>Formulator's Exemption Statement</b> (EPA Form 8570-27) (Link to form) completed and signed (N/A if source is unregistered or applicant owns the technical)					X
	<b>Data Matrix</b> (EPA Form 8570-35) (Link to form) both internal and external copies (PR 98-5) (Link to PR 98-5) completed and signed (N/A if 100% repack)			X		
5	a) Selective Method (Fee category experts use)	yes	no			
		X				
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	<b>5 Copies of Label</b> (link to <a href="http://www.epa.gov/oppfead1/labeling/lrm/">http://www.epa.gov/oppfead1/labeling/lrm/</a> ) (Electronic labels on CD are encouraged and guidance is available)( link to <a href="http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels">http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels</a> )			X		



7	Is the data package consistent with PR Notice 86-5 (link to PRN 86-5)	X		
8	Notice of Filing (link to <a href="http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm">http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm</a> ) included with petitions (link to <a href="http://www.epa.gov/pesticides/regulating/tolerances.htm">http://www.epa.gov/pesticides/regulating/tolerances.htm</a> )			X
9	If applicable for conventional applications, reduced risk rationale (link to <a href="http://www.epa.gov/opprd001/workplan/reducedrisk.html">http://www.epa.gov/opprd001/workplan/reducedrisk.html</a> )			X
10	Required Data (link to <a href="http://www.epa.gov/pesticides/regulating/data_requirements.htm">http://www.epa.gov/pesticides/regulating/data_requirements.htm</a> ) and/or data waivers. See Footnote C.			
	a) List study (or studies) not included with application			



**Comments:**

- \* Active ingredient is available in OPPIN
- \* The technical product belongs to the applicant
- \* Formulator's exemption statement (Form 8570-27) is absent and unnecessary.
- \* Both the Old and the recently revised CSF are present in the CSF folder.
- \* Study associated with submission is consistent with PR Notice 86-5.
- \* All other documents are properly filled, signed and dated.

lk

MRID 478132

\* N/A – Not Applicable

**Footnotes**

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses. If an unapproved inert is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses **even if a product is currently registered** by consulting the inert Web



site [link to <http://www.epa.gov/opprd001/inerts/lists.html>] and if the inert is not approved, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient**. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at [inertsbranch@epa.gov](mailto:inertsbranch@epa.gov) and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch [Link to [http://www.epa.gov/oppbppd1/biopesticides/contacts\\_bppd.htm](http://www.epa.gov/oppbppd1/biopesticides/contacts_bppd.htm)].

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information [link to <http://www.epa.gov/opprd001/inerts/tips.pdf>] must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

### **Unapproved Inerts Identified on CSFs**

#### **All applications except conventional new products and PIPs**

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;



3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

#### Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R311, R312 or R313), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)
3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

#### PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.



3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

July 28, 2009

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

OPP Decision Number: D-417630  
EPA File Symbol or Registration Number: 70506-EET  
Product Name: BIFENTURE 10WSB/10DF INSECTICIDE/MITIDCIDE  
EPA Receipt Date: 27-Jul-2009  
EPA Company Number: 70506  
Company Name: UNITED PHOSPHORUS, INC

DAVE OLSON  
UNITED PHOSPHORUS, INC  
630 FREEDOM BUSINESS CENTER, SUITE 402  
KING OF PRUSSIA, PA 19406-

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-86-5 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R310

NEW PRODUCT;NON-FAST TRACK (INCLUDES REVIEWS OF PRODUCT  
CHEMISTRY;ACUTE TOXICITY;PUBLIC HEALTH PEST EFFICACY);

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee  
Ombudsman at (703) 305-6249.

Sincerely,

A handwritten signature in cursive script that reads "Teresa Downs".

Front End Processing Staff  
Information Technology & Resources Management Division



{854609@~



# Receipt for Section 3



S: 854609

Resubmission: ☐ Yes ☒ No

Regulatory Type: Product Registration - Section 3

Fee For Service: ☒ Yes ☐ No

Application Type: New Registration

Billable: ☒ Yes ☐ No

Company: 70506 UNITED PHOSPHORUS, INC



Risk Manager: Registration Division, Risk Management Team 13

Product #: 70506-EET Product Name: BIFENTURE 10WSB/10DF INSECTICIDE/MITIDC

Override#:

Me Too

Me Too

Section3:

Product Name:

Application Date: 24-Jul-2009



OPP Rec'd Date: 27-Jul-2009



Front End Date: 28-Jul-2009



Risk Manager Send Date:



FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Receipt Content	
Study	
CSF	
<	>

Fast Track: ☐

New Ingredient: ☐

View/Edit

Receipt Description:

Application for registration

New Ingredient

Request Date:

New Ingredient

Received Date:

Form A: ☐

Signature Date:

Form B: ☐

Signature Date:



Script for Rejection Phone calls

Contact Name: Rebecca A. Clemmer  
Phone #: 610-491-2828  
Email: rebecca.clemmer@uniphos.com

First Call/Initials: lk

Date: 07/30/09

Time: 12:40 p.m.

Second Call/Initials:

Date:

Time:

This is Wilkinson Unichem, EPA contractor.

I'm calling regarding your submission in support of the application for registration of Bifenure IDWS/Dr Insecticide Miticide

We have found the following deficiencies regarding:

PR Notice 86.5: Yes or No

Volume/Study Title:

Volume/Study Title:

Volume/Study Title:

Additional volumes continued on back of page: Yes or No

Application Package: Yes or No

Unapproved insect in CSF

These deficiencies have been approved by EPA.

The corrections can be faxed to 703-305-5060/Attn: \_\_\_\_\_.

Second Call/Email:

If we do not receive the corrections by \_\_\_\_\_, we will process your submission, accordingly. Please direct all future calls and correspondence to the appropriate EPA Risk Manager.





RE: Update on Bifenture 10WSB/DF Insecticide/Miticide  
Rebecca Clemmer to: Wilkinson Unugboji  
Please respond to rebecca.clemmer

08/04/2009 09:08 AM

Dear Wilkinson,

Attached please find a revised CSF which eliminates the inert mentioned in your email and phone call.

Rebecca

-----Original Message-----

From: Unugboji.Wilkinson@epamail.epa.gov  
[mailto:Unugboji.Wilkinson@epamail.epa.gov]  
Sent: Monday, August 03, 2009 12:28 PM  
To: rebecca.clemmer@uniphos.com  
Subject: Update on Bifenture 10WSB/DF Insecticide/Miticide

Hi Ms. Clemmer,

Consider this as a follow-up email to the voice mail I left on Thursday, July 30, 2009 concerning the deficiency associated with your submission in support of the application for registration of Bifenture 10WSB/DF Insecticide/Miticide. Please find below the deficiency as stated in the voice message:

Application Package:

\*CSF contains an unapproved inert ingredient named [REDACTED] Please provide full compositional information including the manufacturer, trade name, constituent names and CAS number for [REDACTED] or amend the CSF.

Please forward all documents to me via fax at 703-305-5060/ Att: Wilkinson, or via email at unugboji.wilkinson@epa.gov.  
Feel free to contact me via phone at 703-347-8518 for any question related to this deficiency  
Your urgent cooperation is appreciated,  
Thanks.

Unugboji Wilkinson  
Data Analyst - SIGI/EPA Contractor  
One Potomic Yard  
2777 S.Crystal Drive, S-6953  
Arlington, VA 22202  
(703).347.8518

EPA mail: unugboji.wilkinson@epa.gov



Bifenture 10WSB-DF CSF revised.pdf

\*Inert ingredient information may be entitled to confidential treatment\*



# FEE FOR SERVICE





**United Phosphorus, Inc.**

---

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

July 16, 2009

U.S. Environmental Protection Agency  
Government Lockbox 979074  
1005 Convention Plaza  
SL-MO-C2-GL  
St. Louis, MO 63197

Re: Payment of PRIA Fee

To Whom It May Concern:

Enclosed please find a check for \$4,578.00 in advance payment of the PRIA fee for the application for registration of an end-use bifenthrin product. The Company Number is 70506.

Please contact me by telephone or at the email address below if you have any questions.

Very truly yours,

A handwritten signature in black ink that reads 'R. A. Clemmer'.

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)



\*Commercial/financial information may be entitled to confidential treatment\*

UNITED PHOSPHORUS INC Telephone 1-610-491-2875 SAP  
12057  
Paid To: ENVIRONMENTAL PROTECTION AGENCY

NET 4,578.00  
CHECK DATE 07/15/2009  
CHECK NO. 000009870

INVOICE NUMBER	DOCUMENT NUMBER	AMOUNT	DISCOUNT	NET
70506	0026251447	4,578.00	0.00	4,578.00
TOTALS		4,578.00	0.00	4,578.00

MESSAGES

C2REBECCA

THE FACE OF THIS DOCUMENT CONTAINS SECURITY PRINTING. THE BACK OF THIS DOCUMENT FEATURES SECURITY PRINTING-HOLD AT AN ANGLE TO VIEW.

UNITED PHOSPHORUS INC  
630 Freedom Business Ctr. Ste 402 King of Prussia, PA 19406  
Telephone 1-610-491-2875 SAP

JP Morgan Chase Bank  
6040 Tarbell Rd.  
Syracuse, N.Y. 13206

50-937  
213

CHECK NO. 000009870  
07/15/2009

PAY: Four Thousand Five Hundred Seventy-Eight And No/100 Dollars

TO THE ORDER OF: ENVIRONMENTAL PROTECTION AGENCY  
PESTICIDE MAINTENANCE FEES  
P.O. Box 979031  
ST. LOUIS, MO 63197-9000

PAY THIS AMOUNT

\$\*\* \*\*\*\*\*4,578.00

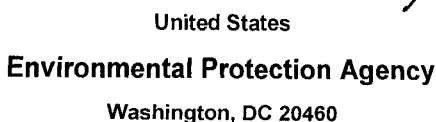
Not Valid After 100 Days

*Eric*  
Financial Officer

⑈000009870⑈



Form Approved, OMB No. 2070-0060, Approval expires 5-31-98



X

Registration  
Amendment  
Other

OPP Identifier Number

## Application for Pesticide – Section I

1. Company/Product Number 70506- <u>EET</u>	2. EPA Product Manager Gebken	3. Proposed Classification
4. Company/Product (Name) United Phosphorus, Inc/Bifenture 10WSB/DF insecticide/Miticide	PM # 13	<input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
5. Name and Address of Applicant (Include ZIP Code) United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:  EPA Reg No. 279-3108  Product Name Brigade WSB Insecticide Miticide	
<input checked="" type="checkbox"/> Check if this is a new address		

## Section - II

<input type="checkbox"/> Amendment – Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input type="checkbox"/> Notification – Explain below	<input type="checkbox"/> Other – Explain below

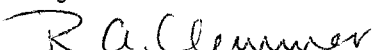
**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

### Application for registration

### Section III

1. Material This Product Will be Packaged in:										
Child-Resistant Packaging		Unit Packaging		Water Soluble Packaging				2. Type of Container		
<input type="checkbox"/>	Yes	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	Metal	<input type="checkbox"/>	Plastic	
<input checked="" type="checkbox"/>	No	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	No	<input type="checkbox"/>	Glass	<input checked="" type="checkbox"/>	Paper	
<b>*Certification must be submitted</b>		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	<input type="checkbox"/> Other (Specify) _____				
3. Location of Net Contents Information			4. Size(s) Retail Container			5. Location of label directions				
<input checked="" type="checkbox"/>	Label	<input type="checkbox"/>	Container	1 lb wsb			<input type="checkbox"/>	On Label	<input checked="" type="checkbox"/>	On Label accompanying product
6. Manner in Which Label is Affixed to Product				<input type="checkbox"/>	Lithograph	<input type="checkbox"/> Other _____				
				<input checked="" type="checkbox"/>	Paper glued					
				<input type="checkbox"/>	Stenciled					

## Section IV

1. Contact Person (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Rebecca A. Clemmer	Title Regulatory Manager	Telephone No. (Include Area Code) 610-491-2828
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law		6. Date Application Received     <b>(Stamped)</b>
2. Signature 	3. Title Regulatory Manager	
4. Typed Name Rebecca A. Clemmer	5. Date July 24, 2009	

**EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.**

White -- EPA File Copy (Original)      Yellow -- Applicant Copy





## United Phosphorus, Inc.

630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406  
(610) 491-2828 (phone)  
(610) 491-2810 (fax)

Rebecca A. Clemmer  
Regulatory Manager

July 24, 2009

Mr. Richard Gebken (PM 13)  
Document Processing Desk (REG)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
Room S-4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Re: Application for Registration  
Bifenture 10 WSB Insecticide (EPA Reg. No. 70506- )

Dear Mr. Gebken:

United Phosphorus, Inc. (UPI) is submitting an application for a registration of Bifenture 10 WSB Insecticide, an end-use product which is produced from the registered technical UPI Bifenthrin Technical (EPA Reg. No. 70506-18). The label is substantially similar FMC's Brigade, EPA Reg. No. 279-3108 with the exception that there is label wording for use in water soluble packaging and not.

Enclosed with this letter, please find the following items:

1. Application for Pesticide Registration (EPA Form 8570-1).
2. Confidential Statement of Formula, basic and alternate (EPA Form 8570-4) dated July 20, 2009.
3. Data matrix forms - Agency Use and Public File copies (EPA Form 8570-35).
4. Five (5) copies of the proposed labeling.
5. EPA form 8570-34, Certification with Respect to Offers to Pay, using the cite-all method to satisfy data requirements other than product specific data.
6. Copy of the letter accompanying payment of the PRIA fee.
7. A CD containing an electronic version of the label
8. Certification of label integrity form.
9. Transmittal document.
10. Three (3) copies of reports for product specific data listed in the attached Transmittal Document.

The label is based upon FMC's full label approval on August 28, 2008. It also includes the draft wording that was subsequently required by the Agency, and the changes FMC made to



Notification on October 10, 2008, as well as the information required by PR 2007-4 regarding containers and residue. UPI has revised the words 'should' and 'recommend' where appropriate and has made some other non-substantive changes to avoid copyright issues.

In addition, as allowed by PR Notice 94-8, we are providing wording for product both in water soluble bags and not. We expect to utilize the alternate formula presented in the CSF for the non-WSP product, as the alteration of the one inert makes a less-dusty product suitable to this type of packaging. In the label, the wording that will appear only on the WSP packaging is represented by *italics*, and the wording that will be only on the DF packaging is represented by underline. There is a difference between the two formulas of the amounts of two inerts; no change is made in the identity of the inerts or the amount of active ingredient. The alternate formula provides the slightly less dusty product more appropriate for non water soluble packaging.

This action should fall within the PRIA category R310 "New end-use or manufacturing-use product, requires review of data package within RD" with a PRIA fee of \$4578.

Please let me know if you have any questions about this application or if any additional information is needed.

Very truly yours,

A handwritten signature in black ink, appearing to read "R. A. Clemmer". The signature is fluid and cursive, with a large initial "R" and "A".

Rebecca A. Clemmer  
[rebecca.clemmer@uniphos.com](mailto:rebecca.clemmer@uniphos.com)



## TRANSMITTAL DOCUMENT

### Submitter

United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

### Regulatory action in support of which this package is submitted

Application for Registration of Bifenture 10 WSB Insecticide

### Transmittal Date

July 24, 2009

### Submitted Studies

MRID	Title	Guideline
	Bifenture 10 WSB/DF Insecticide: Product Identity, Composition and Analysis. United Phosphorus, Inc., Study No. UPI-2009-006. July 23, 2009	Series 830, group A
	Bifenture 10 WSB Insecticide: Self-Certification of Physical/Chemical Properties. United Phosphorus, Inc., Study No. UPI-2009-007, June 12, 2009.	Series 830, group B
	Validation of Analytical Method for Active Ingredient Analysis of Bifen WSB by HPLC. Jai Research Foundation, Study No. 8625. March 9, 2009	830.1800
	Acute Oral Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 1100. March 13, 2009.	870.1100
	Acute Dermal Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8607. March 16, 2009.	870.1200
	Acute Inhalation Toxicity Study of Bifen WSB in Rats. Jai Research Foundation, Study No. JRF 8608. March 16, 2009.	870.1300
	Acute Eye Irritation Study of Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8610. March 13, 2009.	870.2400
	Acute Dermal Irritation Study in Bifen WSB in Rabbits. Jai Research Foundation, Study No. JRF 8609. March 13, 2009.	870.2500
	Skin Sensitization Study of Bifen WSB in Guinea Pigs (Guinea Pig Maximization Test). Jai Research Foundation, Study No. JRF 8611. March 25, 2009.	870.2600





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**1200 Pennsylvania Avenue, N.W.**  
**WASHINGTON, D.C. 20460**

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**Certification with Respect to Citation of Data**

Applicant's/Registrant's Name, Address, and Telephone Number United Phosphorus, Inc., 630 Freedom Business Ctr, King of Prussia PA 19406 Tel: 610-491-2828	EPA Registration Number/File Symbol
Active Ingredient(s) and/or representative test compound(s) Bifenthrin	Date July 24, 2009
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial crops	Product Name Bifenture 10 WSB/DF Insecticide

**NOTE:** If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

**SECTION I: METHOD OF DATA SUPPORT** (Check one method only)

<input type="checkbox"/> I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	<input checked="" type="checkbox"/> I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).
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**SECTION II: GENERAL OFFER TO PAY**

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

**SECTION III: CERTIFICATION**

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature <i>R. A. Clemmer</i>	Date 7/24/09	Typed or Printed Name and Title Rebecca A. Clemmer/Regulatory Manager
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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.

WASHINGTON, D.C. 20460

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## DATA MATRIX

Date: July 23, 2009	EPA Reg No./ File Symbol 70506-	Page 1 of 2
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture 10 WSB/DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
<b>PRODUCT SPECIFIC DATA</b>					
830.1550	Chemical identity	UPI-2009-006	UPI	OWN	
830.1600	Starting Materials	UPI-2009-006	UPI	OWN	
830.1650	Description of formulation process	UPI-2009-006	UPI	OWN	
830.1670	Discussion of formation of impurities	UPI-2009-006	UPI	OWN	
830.1750	Certified limits	UPI-2009-006	UPI	OWN	
830.1800	Enforcement analytical method	UPI-2009-006	UPI	OWN	
830.6302	Color	UPI-2009-007	UPI	OWN	
830.6303	Physical state	UPI-2009-006	UPI	OWN	
830.6304	Odor	UPI-2009-006	UPI	OWN	
830.6314	Oxidation/reduction	UPI-2009-006	UPI	OWN	
830.6315	flammability	UPI-2009-006	UPI	OWN	
830.6316	Explosibility	UPI-2009-006	UPI	OWN	
830.6317	Storage stability	UPI-2009-006	UPI	OWN	
830.6319	Miscibility	UPI-2009-006	UPI	OWN	
830.6320	Corrosion characteristics	UPI-2009-006	UPI	OWN	
830.6321	Dielectric breakdown voltage	UPI-2009-006	UPI	OWN	
830.7000	pH	UPI-2009-006	UPI	OWN	
830.7100	viscosity	UPI-2009-006	UPI	OWN	
830.7300	Density/relative density/bulk density	UPI-2009-006	UPI	OWN	
870.1100	Acute oral toxicity	JRF 8606	UPI	OWN	
870.1200	Acute dermal toxicity	JRF 8607	UPI	OWN	
870.1300	Acute inhalation toxicity	JRF 8608	UPI	OWN	

Signature <i>R. A. Clemmer</i>	Name and Title Rebecca A. Clemmer, Regulatory Manager	Date 7/23/09
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## DATA MATRIX

Date: July 23, 2009	EPA Reg No./ File Symbol 70506-	Page 2 of 2
Applicant's/Registrant's Name and Address: United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19403	Product: Bifenture 10 WSB/DF Insecticide	
Ingredient: Bifenthrin (PC 128825)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.2400	Eye irritation	JRF 8610	UPI	OWN	
870.2500	Dermal irritation	JRF 8609	UPI	OWN	
870.2600	Dermal sensitization	JRF 8611	UPI	OWN	
GENERIC DATA					
		CITE ALL	Nufarm Americas, FMC, Bayer, Scotts Company, McLaughlin Gormley King, Fuller System, S.C. Johnson, Amvac, Helena, Southern States Cooperative, Nippon Soda Co., The Andersons, Sunniland Corp., Lesco Inc., Makhteshim-Agan, Loveland Products, Howard Fertilizer, Albaugh, BASF Sparks, Control Solutions, Arizona Chemical Group, Arysta Lifescience, Bengal Products, Sapstain Industry Group, Non-Dietary Exposure TF, Univar USA, Residential Exposure JF, Atex Inc., Ag Handlers TF, Osmose Utilities, Ensystex II, Ensystex IV, J. Oliver Products, Axss USA.	PAY	NOTE: United Phosphorus, Inc. is a member of the ARETF, ORETF and SDTF.

Signature <i>R. A. Clemmer</i>	Name and Title Rebecca A. Clemmer, Regulatory Manager	Date 7/23/09
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# Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
70506-	July 24, 2009	070506-xxxxx.20090724.Bifenture WSB-DF proposed.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

  
Signature

July 24, 2009  
Date

Rebecca A. Clemmer  
Name (typed)

Regulatory Manager  
Title



# There is an ELECTRONIC LABEL for this action

You can use Acrobat to compare the e-label to the previous version (and find the changes). You can also use Acrobat to mark-up the e-label with your comments.

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then you will find e-label in

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*If the e-label is not found in the ELL then it was probably not named correctly and could not be entered into the ELL. However, the file can be retrieved from the CD which is retained by the Front End.*

or

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then you will find e-label in

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If you have any questions on e-labels, please contact one of your division e-label experts:

AD

Willie Abney

308-1689

Renae Whitaker

308-7003

Tracy Lantz

308-6415

BPPD

RD

Tom Harris

308-9423



**FOR OFFICIAL USE ONLY**

FILE SYMBOL

REGISTRATION NO.

70506-EET

**CONFIDENTIAL STATEMENT OF FORMULA ENCLOSED**

DATE SUBMITTED	SUBMITTED BY (✓)	
	APPLICANT	BASIC SUPPLIER
JUL 27 2009		

**Do Not Write Comments,  
Formula, or Parts of Formula  
on This Envelope**

**NOTE**

It shall be unlawful—for any person to use for his own advantage or to reveal, other than to the Secretary, or officials or employees of the United States Department of Agriculture or other Federal agencies, or to the courts in response to a subpoena, or to physicians, and in emergencies to pharmacists and other qualified persons, for use in the preparation of antidotes, in accordance with such directions as the Secretary may prescribe, any information relative to formulas of products acquired by authority of Section 4 of the "Federal Insecticide, Fungicide, and Rodenticide Act."



